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1907—1912.

VOL. I.—SIXTH QUINQUENNIAL REVIEW.

Presented to both Houses of Parliament by Command of His Majesty.

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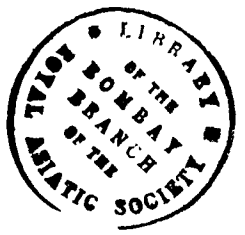

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CONTENTS.

	Page.
Educational Policy of the Government of India—Resolution	i—xvii
CHAPTER I.—INTRODUCTORY	1
CHAPTER II.—EVOLUTION OF POLICY.	
Early policy	3
Characteristics of policy	8
General organisation	13
CHAPTER III.—GENERAL PROGRESS.	
Statistical progress	15
Change in attitude of the people	18
General improvements	18
Main events of the period	25
CHAPTER IV.—CONTROLLING AGENCIES.	
General	29
The services	29
Inspection	32
Other agencies	36
CHAPTER V.—UNIVERSITIES.	
General	41
Organisation	44
Courses, examinations and degrees	48
University teaching	51
Numerical progress, buildings, etc.	53
CHAPTER VI.—ARTS COLLEGES.	
Progress in the quinquennium	59
College life	63
CHAPTER VII.—SECONDARY EDUCATION.	
General	71
Progress in the quinquennium	75
School life	81
The grant-in-aid system	84
Courses	87
Methods	91
School-leaving examinations and certificates	95
Wastage in schools	102

PAGE

CHAPTER VIII.—PRIMARY EDUCATION.

General 105
Progress in the quinquennium 106
School life 111
Management 114
Systems of grant-in-aid 119
Teachers 121
Courses 125
Free and compulsory education 131
Educational surveys 134
The education of those in employment 135
Middle vernacular schools 138
Education and literacy 139

CHAPTER IX.—PROFESSIONAL COLLEGES AND SCHOOLS.

Introductory 145
Law 145
Medicine 150
Engineering and surveying 153
Agriculture 158
Forestry 166
Veterinary science 169

CHAPTER X.—TECHNICAL AND INDUSTRIAL EDUCATION.

General 173
Technological institutions 176
Technical schools 177
Industrial schools 180
Weaving 182
Schools of art 183
Commercial schools 185

CHAPTER XI.—TRAINING OF TEACHERS.

General 187
English training institutions 191
Vernacular training institutions 197
Special measures 201

CHAPTER XII.—ORIENTAL STUDIES 203

CHAPTER XIII.—EDUCATION OF GIRLS.

General 211
Institutions 215
Special characteristics 219

CHAPTER XIV.—EDUCATION OF CHIEFS AND NOBLES . . . 227

CHAPTER XV.—EDUCATION OF EUROPEANS.

General 231
Progress in the quinquennium 231
Institutions 234
Special features 237

PAGE

CHAPTER XVI.—EDUCATION OF MUHAMMADANS.

Attitude of Muhammadans towards education 245
Progress during the quinquennium 245
Muhammadans in ordinary institutions 248
Special institutions for Muhammadans 250
Miscellaneous measures 253

CHAPTER XVII.—EDUCATION OF BACKWARD CLASSES.

General 255
Aboriginals 255
Depressed classes 259
Isolated communities 260
Special measures adopted 261

CHAPTER XVIII.—EDUCATION OF DEFECTIVES 265

CHAPTER XIX.—REFORMATORY SCHOOLS 267

CHAPTER XX.—PRIVATE INSTITUTIONS 271

CHAPTER XXI.—EDUCATION IN SPECIAL AREAS 277

CHAPTER XXII.—TEXT-BOOKS, LIBRARIES AND PUBLICATIONS.

Text-books 279
Libraries, publications, etc. 283
Visual instruction 284

INDEX.

EDUCATIONAL POLICY OF THE GOVERNMENT OF INDIA.

Correction slip to the Quinquennial Review of Education 1907—1912.

Para. 316, first line.—After " 29·8 " *read* " per cent."

Para. 604, twenty-first line.—Omit " those in "

Para. 604, twenty-fourth line.—For " that " *read* " the number of those in "

EDUCATIONAL POLICY OF THE GOVERNMENT OF INDIA.

Resolution of the Government of India in the Department of Education, dated Delhi, the 21st February 1913.

His Most Gracious Imperial Majesty the King-Emperor, in replying to the address of the Calcutta University on the 6th January 1912, said: *Comprehensive systems of education.*

"It is my wish that there may be spread over the land a network of schools and colleges, from which will go forth loyal and manly and useful citizens, able to hold their own in industries and agriculture and all the vocations in life. And it is my wish, too, that the homes of my Indian subjects may be brightened and their labour sweetened by the spread of knowledge with all that follows in its train, a higher level of thought, of comfort and of health. It is through education that my wish will be fulfilled, and the cause of education in India will ever be very close to my heart."

2. The Government of India have decided, with the approval of the Secretary of State, to assist Local Governments, by means of large grants from imperial revenues as funds become available, to extend comprehensive systems of education in the several provinces. Each province has its own educational system, which has grown up under local conditions, and become familiar to the people as a part of their general well-being. In view of the diverse social conditions in India there cannot in practice be one set of regulations and one rate of progress for the whole of India. Even within provinces there is scope for greater variety in types of institutions than exists to-day. The Government of India have no desire to centralise provincial systems or to attempt to introduce a superficial uniformity. Still less do they desire to deprive Local Governments of interest and initiative in education. But it is important at intervals to review educational policy in India as a whole. Principles, bearing on education in its wider aspects and under modern conditions and conceptions, on orientalia and on the special needs of the domiciled community, were discussed at three important conferences of experts and representative non-officials held within the last two years. These principles are the basis of accepted policy. How far they can at any time find local application must be determined with reference to local conditions.

3. The defects of educational systems in India are well known and need not be re-stated. They have been largely due to want of funds. Of late years there has been real progress in removing them. In the last decade* the total expenditure from all sources on education has risen from 4 crores to nearly $7\frac{1}{4}$ crores. The progress has been especially great since Lord Curzon's government introduced large measures of educational reform. In the last four years the number of those under instruction has increased from about $5\frac{1}{3}$ to $6\frac{1}{3}$ millions. Again, the formerly crushing weight of examinations has been appreciably lightened; a commencement has been made in the reform of university and college organisation; and the grants from public funds to private institutions have almost doubled in the past nine years. These facts speak for themselves. Nor must the great benefits, which education has conferred on India, be ignored or minimised. Criticism based on imperfect analogies is often unjust. It is not just, for instance, to compare Indian systems still for the most part in their infancy with the matured systems of the modern western world, or to disregard the influences of social organisation and mentality. Again the common charge that the higher education of India has been built up on a slender foundation of popular education and that its teaching agency is inefficient, is one that might have been levelled against every country in Europe at some period of its history. India is now passing through stages taken by other countries in their time. *The need of true perspective.*

4. In the forefront of their policy the Government of India desire to place the formation of the character of the scholars and under-graduates under tuition. In the formation of character the influence of home and the personality of the teacher play the larger part. There is reason to hope—in the light of acquired experience—that increased educational facilities under *Formtiaon of character the main objective.*

*i.e., 1901 to 1911.

better educational conditions will accelerate social reform, spread female education and secure better teachers. Already much attention is being given to religious and moral education in the widest sense of the term, comprising, that is, direct religious and moral instruction, and indirect agencies such as monitorial or similar systems, tone, social life, traditions, discipline, the betterment of environment, hygiene and that most important side of education, physical culture and organised recreation.

Direct religious and moral instruction.

5. The question of religious and moral instruction was discussed at a local conference held in Bombay and subsequently at the imperial conference held in Allahabad in February 1911. Grave differences of opinion emerged as to the possibility or advantage of introducing direct religious instruction into schools generally, and apprehensions of difficulty in the working of any definite system were put forward. Doubts were also expressed as to the efficacy of direct moral instruction when divorced from religious sanctions. In the matter of moral teaching, however, the difficulties are undoubtedly less than in the case of religious teaching. The papers laid before the conference indicate that not a little moral instruction is already given in the ordinary text-books and in other ways. The Government of Bombay are engaged upon the preparation of a book containing moral illustrations, which will be placed in the hands of teachers in order to assist them in imparting moral instruction. Excellent materials for ethical teaching are available in the Mahabharata, the Ramayana, portions of Hafiz, Sadi, Maulana Rumi and other classics in Sanskrit, Arabic, Persian and Pali. The Government of India while bound to maintain a position of complete neutrality in matters of religion observe that the most thoughtful minds in India lament the tendency of existing systems of education to develop the intellectual at the expense of the moral and religious faculties. In September 1911 they invited Local Governments other than the Bombay Government to assemble local committees in order to consider the whole question. Such committees are still at work in some provinces. For the present the Government of India must be content to watch experiments and keep the matter prominently in view. Enlightened opinion and accumulated experience will, it is hoped, provide a practical solution to what is unquestionably the most important educational problem of the time.

Indirect agencies, e.g., *hostels, school buildings, traditions, etc.*

6. There has been real progress of late years in the provision of hostels. In the last decade the numbers both of hostels and of resident male students have nearly doubled, and now stand at over 2,200 and over 78,000 respectively. The Government of India desire to see the hostel system develop until there is adequate residential accommodation attached to every college and secondary school in India. But a hostel of itself will not achieve the desired end unless effective means are adopted for guiding students and assisting them in their work and in their recreation. Already in some first-class institutions in the country admirable arrangements have been made on European lines to secure the full benefits of the residential system. Again it is reassuring that traditions are growing up, that meetings of old boys are held, that debating and literary societies are becoming more common. All these require help which will in many cases best be organised in connection with the hostel system. Much has also been done of late to improve school buildings; but a large number of thoroughly unsuitable, not to say mean, squalid and insanitary buildings still exist in India. These will be replaced, as funds permit, by modern buildings designed upon sanitary lines and with a view to avoid overcrowding and to facilitate the maintenance of discipline. The Government of India hope that the time is not far distant when educational buildings will be distinguished as the most modern and commodious buildings in the locality, and scholars in India will have the advantages in this respect of scholars in the west. The influence for good of clean well arranged buildings with the concomitant domestic discipline can scarcely be exaggerated.

Hygiene.

7. The claims of hygiene are paramount not only in the interests of the children themselves, though these are all-important, but also as an object lesson to the rising generation. Hitherto want of funds and the apathy of the people have been responsible for the comparatively small attention paid to hygiene. In some provinces a simple course of instruction in hygiene is

prescribed, at some period of the school course, but the lessons are often of too formal a type, are not connected with the life of the pupil, and fail to form his habits or to enlist his intelligence in after-life in the struggle against disease. In some areas there is a general inspection of school premises by a medical authority; but it is believed that little is done for the individual inspection of school children and that medical advice has not always been enlisted in regard to the length of the school day, the framing of curricula, and such matters. The Government of India commend to Local Governments a thorough enquiry, by a small committee of experts, medical and educational, into school and college hygiene. The scope of the enquiry will no doubt vary in different parts of India, but the following seem to be important matters for investigation :—

(*i*) The condition of school houses, hostels and other places where pupils reside, from the point of view of sanitation.

(*ii*) The professional examination of building plans from the hygienic point of view.

(*iii*) The introduction of a simple and more practical course of hygiene; whether it should be a compulsory subject in the various schemes of school leaving certificates, and whether it should be recommended to universities as part of their matriculation examination.

(*iv*) The inspection, where possible, of male scholars, with special reference to infectious diseases, eyesight and malaria.

(*v*) The length of the school day, home studies, and the effect upon health of the present system of working for formal examinations.

(*vi*) The requirements in the way of recreation grounds, gardens, gymnasia, reading rooms, common rooms, etc.

(*vii*) The inspecting and administrating agency required, the possibility of co-operation with existing organisations and the provision of funds.

8. Other cardinal principles of policy may here be stated *Other cardinal principles of policy.*

(1) The steady raising of the standard of existing institutions should not be postponed to increasing their number when the new institutions cannot be efficient without a better-trained and better-paid teaching staff.

(2) The scheme of primary and secondary education for the average scholar should steadily, as trained teachers become available, be diverted to more practical ends, *e.g.*, by means of manual training, gardening, out-door observation, practical teaching of geography, school excursions, organised tours of instruction, etc.

(3) Provision should be made for higher studies and research in India, so that Indian students may have every facility for higher work without having to go abroad.

9. The provision of facilities for research cannot be postponed. In almost every branch of science and the arts, in philosophy, history, geography, language, literature, economics, sociology, medicine, public health, agriculture, biology, geology, botany and in all the sciences applied to industry, not to particularise more closely, there is a wide untrodden field awaiting research. Among the essentials are good libraries, laboratories and collections, ample leisure and freedom in study, systematic collaboration of professors and students, an atmosphere engendered by the simultaneous working of many minds on numerous but interdependent branches of research. Only when they know the methods of research by which the knowledge they are to impart is secured and tested are teachers fully equipped for their work in the more advanced stages of education. *Research.*

10. The propositions that illiteracy must be broken down and that primary education has, in the present circumstances of India, a predominant *Primary education.*

Compulsory and free education not practicable.

claim upon the public funds, represent accepted policy no longer open to discussion. For financial and administrative reasons of decisive weight the Government of India have refused to recognise the principle of compulsory education; but they desire the widest possible extension of primary education on a voluntary basis. As regards free elementary education the time has not yet arrived when it is practicable to dispense wholly with fees without injustice to the many villages which are waiting for the provision of schools. The fees derived from those pupils who can pay them are now devoted to the maintenance and expansion of primary education, and a total remission of fees would involve to a certain extent a more prolonged postponement of the provision of schools in villages without them. In some provinces elementary education is already free and in the majority of provinces liberal provision is already made for giving free elementary instruction to those boys whose parents cannot afford to pay fees. Local Governments have been requested to extend the application of the principle of free elementary education amongst the poorer and more backward sections of the population. Further than this it is not possible at present to go.

Primary education. General principles.

11. For guidance in the immediate future, with the necessary modifications due to local conditions, the Government of India desire to lay down the following principles in regard to primary education :—

(*i*) Subject to the principle stated in paragraph 8 (1) *supra*, there should be a large expansion of lower primary schools teaching the three R's with drawing, knowledge of the village map, nature study and physical exercises.

(*ii*) Simultaneously upper primary schools should be established at suitable centres and lower primary schools should where necessary be developed into upper primary schools.

(*iii*) Expansion should be secured by means of board schools, except where this is financially impossible, when aided schools under recognised management should be encouraged. In certain tracts liberal subsidies may advantageously be given to *maktabs, pathshalas* and the like which are ready to undertake simple vernacular teaching of general knowledge. Reliance should not be placed upon "venture schools," unless by subjecting themselves to suitable management and to inspection they earn recognition.

(*iv*) It is not practicable at present in most parts of India to draw any great distinction between the curricula of rural and of urban primary schools. But in the latter class of schools there is special scope for practical teaching of geography, school excursions, etc., and the nature study should vary with the environment, and some other form of simple knowledge of the locality might advantageously be substituted for the study of the village map. As competent teachers become available a greater differentiation in the courses will be possible.

(*v*) Teachers should be drawn from the class of the boys whom they will teach; they should have passed the middle vernacular examination, or been through a corresponding course, and should have undergone a year's training. Where they have passed through only the upper primary course and have not already had sufficient experience in a school, a two years' course of training is generally desirable. This training may in the first instance be given in small local institutions, but preferably, as funds permit, in larger and more efficient central normal schools. In both kinds of institutions adequate practising schools are a necessary adjunct, and the size of the practising school will generally determine the size of the normal school. As teachers left to themselves in villages are liable to deteriorate there are great advantages in periodical repetition and improvement courses for primary school teachers during the school vacations.

(*vi*) Trained teachers should receive not less than Rs. 12 per month (special rates being given in certain areas); they should be placed

in a graded service; and they should either be eligible for a pension or admitted to a provident fund.

(*vii*) No teachers should be called on to instruct more than 50 pupils; preferably the number should be 30 or 40; and it is desirable to have a separate teacher for each class or standard.

(*viii*) The continuation schools known as middle or secondary vernacular schools should be improved and multiplied.

(*ix*) Schools should be housed in sanitary and commodious but inexpensive buildings.

12. While laying down these general principles the Government of India recognise that in regard to primary education conditions vary greatly in different provinces. In the old province of Bengal, for instance, where there is already some sort of primary school for a little over every three square miles of the total area of the province, the multiplication of schools may very well not be so urgent a problem as an increase in the attendance and an improvement in the qualifications of the teachers. In some parts of India at the present time no teacher in a primary school gets less than 12 rupees a month. In Burma all conditions are different and monastic schools are an important feature of the organisation. Different problems, again, present themselves where board schools and aided schools respectively are the basis of the system of primary education. Nor must it be supposed that the policy laid down in these general terms for the immediate future limits the aspirations of the Government of India or the Local Governments. Indeed the Government of India hope that the day is not far distant when teachers in primary schools will receive considerably higher remuneration, when all teachers will be trained, and when it will be possible to introduce more modern and elastic methods in primary schools.

Vernacular continuation schools.

13. Vernacular continuation schools are the only entrance to more advanced study which does not demand acquaintance with a foreign language; and it is in them that competent teachers for primary schools will be prepared. Technical and industrial progress also is likely to create numerous openings for men with a good vernacular education. In certain provinces owing to the popularity and cheapness of English education these institutions have declined. But in the whole of India in the last decade the number of schools has increased from 2,135 to 2,666 and that of their scholars from over 177,000 to close on 257,000. The Government of India believe that these schools will become much more popular and useful when they are placed on a sound footing; they also think that it would be an advantage if an advanced vernacular course could be provided at selected centres for students desirous of becoming teachers in these continuation schools.

14. In some provinces special classes have been opened in secondary English schools for scholars who have been through the whole course at a vernacular continuation school in order to enable them to make up ground in English. There is much experience to the effect that scholars who have been through a complete vernacular course are exceptionally efficient mentally. The Government of India recommend arrangements on the above lines to all Local Governments and Administrations which have not already introduced them.

Proposed expansion.

15. It is the desire and hope of the Government of India to see in the not distant future some 91,000 primary public schools added to the 100,000 which already exist for boys and to double the $4\frac{1}{4}$ millions of pupils who now receive instruction in them. For purposes of present calculation a sum of Rs. 375 per annum may be taken as a rough approximation of the probable average cost of maintenance of a primary board school. This figure provides for two teachers, one on Rs. 15 and one on Rs. 12 per month and Rs. 4 per month for the purchase of books and stationery, petty repairs, prizes and for necessary contingencies. This is, however, only an average figure for the whole of India. In India as a whole the average cost of a board or municipal school is at present Rs. 315 per annum. In Bombay the average cost of a primary school under any kind of management is now about Rs. 437, but this figure includes the cost of the higher classes, which in some other provinces are classed as middle or secondary vernacular classes.

Education of girls.

16. The education of girls remains to be organised. In 1904 the Government of India remarked that peculiar difficulties were encountered in this branch of education owing to the social customs of the people, but that as a far greater proportional impulse is imparted to the educational and moral tone of the people by the education of women than by the education of men liberal treatment had been accorded for girls in respect of scholarships and fees. This policy has been continued. Efforts have been also made, not without success, to bring education, through the agency of governesses, within the reach of *purda* ladies, to increase the number of ladies on the inspecting staff and to replace male by female teachers in government and aided schools. The number of girls under instruction has risen from 444,470 in 1901-02 to 864,363 in 1910-11. But the total number still remains insignificant in proportion to the female population. The Government of India believe, however, that in certain areas there are indications of a swiftly growing demand for a more extensive education of girls.

17. The immediate problem in the education of girls is one of social development. The existing customs and ideas opposed to the education of girls will require different handling in different parts of India. The Governor General in Council accordingly hesitates to lay down general lines of policy which might hamper Local Governments and Administrations, and has preferred to call for schemes from each province; but he commends the following principles for general consideration:—

(*a*) The education of girls should be practical with reference to the position which they will fill in social life;

(*b*) It should not seek to imitate the education suitable for boys nor should it be dominated by examinations;

(*c*) Special attention should be paid to hygiene and the surroundings of school life;

(*d*) The services of women should be more freely enlisted for instruction and inspection; and

(*e*) Continuity in inspection and control should be specially aimed at.

18. The difficulty of obtaining competent schoolmistresses is felt acutely in many parts of the country. In this connection it has been suggested that there is a large opening for women of a domiciled community, who have a knowledge of the vernacular and who might be specially trained for the purpose.

Secondary English education.

19. The importance of secondary English and in particular of high school education is far-reaching. Secondary education of one grade or another is the basis of all professional or industrial training in India. The inferior output of secondary schools invades colleges and technical institutions and hinders the development of higher education. At the Allahabad conference the directors of public instruction unanimously regarded the reform of secondary English schools as the most urgent of educational problems. The improvement of secondary English education has for some time occupied the attention of the Government of India and the Local Governments and it is hoped in the near future to remedy many defects of the present system.

20. In the last nine years the number of secondary schools has increased from nearly 5,500 to over 6,500 and the number of scholars from 622,000 to 900,000. The policy of government is to rely so far as possible on private enterprise in secondary education. This policy, laid down in the despatch of 1854, was restated and amplified by the Education Commission of 1882, which, while doubtful as to how far the process of withdrawal on the part of government should be carried, agreed that, whatever degree of withdrawal from the direct provision of education might be found advisable, there should be no relaxation of indirect but efficient control by the State. The admixture of private management and State control was again emphasised in the resolution of 1904. To this policy the Government of India adhere. It is dictated not by any belief in the inherent superiority of private over State management, but by preference for an established system and, above all, by the necessity of concentrating the direct energies of the State and the bulk of its

available resources upon the improvement and expansion of elementary education. The policy may be summarised as the encouragement of privately managed schools under suitable bodies maintained in efficiency by government inspection, recognition and control, and by the aid of government funds.

21. Some idea of the extension of private enterprise may be gained by the reflection that, of 3,852 high and middle English schools, only 286 are government institutions. These figures, however, cover many types of schools, from the most efficient to the least efficient. Admirable schools have been and are maintained by missionaries and other bodies. But the underlying idea of the grant-system, the subvention of local organised effort, has not always been maintained. Schools of a money-making type, ill-housed, ill-equipped, and run on the cheapest lines, have in certain cases gained recognition and eluded the control of inspection. Schools have sprung into existence in destructive competition with neighbouring institutions. Physical health has been neglected and no provision has been made for suitable residential arrangements and play-fields. Fee-rates have been lowered; competition and laxity in transfer have destroyed discipline; teachers have been employed on rates of pay insufficient to attract men capable of instructing or controlling their pupils. Above all, the grants-in-aid have from want of funds often been inadequate. No fewer than 360 high schools with 80,247 pupils are in receipt of no grant at all, and are maintained at an average cost of less than half that of a government school, mainly by fee-collections. Especially do these conditions prevail in the area covered by the old provinces of Bengal and Eastern Bengal and Assam; a result due, no doubt, to the rapid extension of English education beyond the ability of the Local Governments to finance it. In Bengal and Eastern Bengal the number of high schools is greater than in the rest of British India put together, and the cost of their maintenance to public funds is proportionatetly less than a third of the cost prevailing in other provinces. A special enquiry showed that out of some 4,700 teachers in privately managed high schools in these areas about 4,200 were in receipt of less than Rs. 50 a month, some 3,300 of less than Rs. 30 a month, while many teachers of English and classical languages drew salaries that would not attract men to superior domestic service. The great variations in conditions in different parts of India point to the difficulty of making any but the most general statements about the results of private enterprise and the special measures that are needed to assist it to perform efficiently its work in the educational system.

Secondary English schools.

General principles.

22. Subject to the necessities of variation in deference to local conditions the policy of the Government of India in regard to secondary English schools is—

(1) To improve the few existing government schools, by
  (*a*) employing only graduates or trained teachers;
  (*b*) introducing a graded service for teachers of English with a minimum salary of Rs. 40 per month and a maximum salary of Rs. 400 per month;
  (*c*) providing proper hostel accommodation;
  (*d*) introducing a school course complete in itself with a staff sufficient to teach what may be called the modern side with special attention to the development of an historical and a geographical sense;
  (*e*) introducing manual training and improving science teaching.

(2) To increase largely the grants-in-aid, in order that aided institutions may keep pace with the improvements in government schools on the above-mentioned lines, and to encourage the establishment of new aided institutions where necessary.

(3) To multiply and improve training colleges so that trained teachers may be available for public and private institutions.

(4) To found government schools in such localities as may, on a survey of local conditions and with due regard to economy of educational effort and expense, be proved to require them.

Grants-in-aid.

23. The Government of India also desire that the grant-in-aid rules should be made more elastic so as to enable each school, which is recognised as necessary and conforms to the prescribed standards of management and efficiency, to obtain the special assistance which it requires in order to attain the fullest measure of utility. As larger grants become available and as the pay and the personnel of the teaching staff are improved it will be possible for the inspecting officer to concentrate his attention more and more upon the general quality of instruction. Full encouragement can then be given to improved and original methods of teaching and courses; and gradually the grant-earning capacity of an institution will come to be judged on grounds of general efficiency and desert rather than by rigid rules of calculation.

Modern side.

24. The introduction of a school course complete in itself and of a modern and practical character, freed from the domination of the matriculation examination, was recommended in the first instance by the Education Commission of 1882. In some provinces and particularly in Madras real progress has been made towards the accomplishment of this reform. The figures for 1901-02 and 1910-11 are:—

	1901-02.		1910-11.	
	School final (candidates).	Matriculation (candidates).	School final (candidates).	Matriculation (candidates).
Madras and Coorg .	194	7,682	7,317*	782
Bombay . . .	1,162	3,731	1,360	3,766
United Provinces .	452	1,704	946	2,206
Central Provinces .		473	538	702

In other provinces, the school final examination has not yet been established except for special purposes. The total number of candidates in 1910-11 for the school final examination or leaving certificate in all British provinces was 10,161; that of candidates for matriculation was 16,952.

Secondary English school-leaving certificate.

25. The principal objects of the school final examination are adaptability to the course of study and avoidance of cram. In those provinces in which a school final examination or school leaving certificate has not been introduced the Government of India desire that it should be instituted as soon as practicable. They suggest for the consideration of Local Governments and Administrations further developments of the system in regard to the character of the tests by which certificates are granted at the end of the school course. Before proceeding further, however, they restate and emphasise the three principles laid down by the Indian Universities Commission in paragraph 170 of their report.

"(1) The conduct of a school final or other school examination should be regarded as altogether outside the functions of a university.

(2) It would be of great benefit to the universities if the government would direct that the matriculation examination should not be accepted as a preliminary or full test for any post in government service. In cases where the matriculation examination qualifies for admission to a professional examination the school final examination should be substituted for it.

(3) It would be advantageous if the school final examination could, in the case of those boys who propose to follow a university career, be made a sufficient test of fitness to enter the university. Failing this, the best arrangement would appear to be that the matriculation candidate should pass in certain subjects in the school final examination, and be examined by the university with regard to any further requirements that may be deemed necessary."

26. The value of external examination cannot be overlooked. It sets before the teacher a definite aim and it maintains a standard; but the definite aim often unduly overshadows instruction, and the standard is necessarily narrow and in view of the large numbers that have to be examined must confine itself to mere examination achievement, without regard to mental development or general growth of character. On the other hand the drawbacks of external examinations are becoming more generally apparent, and attention was prominently drawn to them in the report of the Consultative Committee

* School leaving certificate.

on examinations in secondary schools in England. They fail, especially in India, in that they eliminate the inspecting and teaching staff as factors in the system, that they impose all responsibility upon a body acquainted but little (if at all) with the schools examined, that they rely upon written papers, which afford no searching test of intellect, no test at all of character or general ability, and that they encourage cram.

27. A combination of external and internal examinations is required. The Government of India consider that, in the case of a school recognised as qualified to present candidates for a school leaving certificate, a record should be kept of the progress and conduct of each pupil in the highest classes of the school, and that the inspector should enter his remarks upon these records at his visits and thus obtain some acquaintance with the career of each candidate during the two or three years before examination. These records, together with the marks obtained by pupils at school tests, would be valuable and would supplement a test conducted partly through written papers on the more important subjects of instruction, but also orally and with regard to the pupil's past career. The oral examination would be conducted by the inspector in consultation with members of the staff. A large increase in the superior inspecting staff would be required to work a system of this kind and safeguards would be necessary to protect teachers from undue influences; the Government of India are prepared to assist, with such grants as they may be able to afford, the introduction of any such system which may be locally practicable. The school leaving certificate systems of Madras and the United Provinces fulfil many of the requirements of the reform in view, but their precise characteristics may not be found altogether suitable in other areas Some such system, however, as has been sketched above, adapted to local conditions, would, it is believed, be most beneficial and do more than anything else to foster a system under which scholars would be taught to think for themselves instead of being made to memorize for examination purposes. Next to the improvement of the pay and prospects of teachers, which must accompany and even precede its introduction, this is perhaps the most important reform required in secondary English education.

Technical and industrial education.

28. No branch of education at present evokes greater public interest than technical and industrial instruction. Considerable progress has been made since 1904. Existing educational institutions have been overhauled and equipped for new courses. Scholarships tenable in Europe and America have been established. Thanks to the generosity of the Tata family, seconded by liberal financial aid from the Government of India and His Highness the Maharaja of Mysore, an Indian Institute of Science, designed upon a large scale, has been established at Bangalore; it was thrown open to pupils in 1911. The establishment of a Technological Institute at Cawnpore for the chemistry of sugar manufacture and leather, for textiles and for acids and alkalis, has been sanctioned. Industrial schools have been opened in several provinces. Altogether the number of technical and industrial schools has risen since 1904 from 88 to 218, and the number of pupils from 5,072 to 10,535.

Technical scholarships.

29. The system of technical scholarships tenable abroad is still on trial, and a committee is examining the whole question in England. It is not always easy to arrange suitable courses of study; and study abroad puts the pupils at a disadvantage in removing them from the environment of Indian trade conditions. From the information available it appears that, of 75 scholars sent abroad, 36 have not returned to India while 18 are at present industrially employed in India.

Co-ordination in technical education.

30. The policy to be pursued in regard to technical and industrial education was discussed at the Allahabad conference. The Government of India accept the conclusions of that conference that progress should continue along the lines generally followed hitherto, *viz.*,-that—

(1) the Indian Institute of Science, which provides for research, the application of new processes and the production of thoroughly trained managers, should be developed, as opportunity offers, and become eventually a complete faculty of pure and applied science;

(2) the larger provincial institutions, which attract students from different parts of India, and afford instruction in practical methods of management and supervision, should in the first instance specialise along lines converging on local industries—a plan which will prevent overlapping and make for economy. Subsequently, as industries arise and the demand for managers and foremen increases, other and more varied courses may be found necessary;

(3) the lesser industrial schools, minor weaving institutions, such of the schools of art as have an industrial bent, the artisan classes in Bengal, and trade schools generally should be permanently directed toward such industries as exist in the localities where the institutions are situated.

Technical education on commercial lines.

31. The question has arisen as to how far educational institutions should develop on commercial lines. It has been decided that while educational institutions should in no case trade on commercial lines, in certain cases instruction in industrial schools may be supplemented by practical training in workshops where the application of new processes needs to be demonstrated. In certain cases, also, it will be necessary to purchase and maintain experimental plant for demonstrating the advantages of new machinery or new processes and for ascertaining the data of production.

Industrial openings for Indians.

32. Quite recently Lieutenant-Colonel E. H. deV. Atkinson, R.E., principal of the Thomason College, Roorkee, and Mr. T. S. Dawson, principal of the Victoria Jubilee Technical Institute, Bombay, were deputed to enquire how technical institutions can be brought into closer touch and more practical relations with the employers of labour in India. Their report contains many suggestions which are under consideration, and emphasises the necessity of studying the demand for technically-trained men, of attracting Indian capital to industrial enterprise and of supplementing tuition at college by a period of apprenticeship. It also indicates that, while the field of employment or occupation in the highest grades is at present limited, the outlook for Indians is generally hopeful, provided the necessity for preliminary practical training is fully realised.

Schools of art.

33. There are four government schools of art in India with some 1,300 pupils, of which two are mainly industrial schools or schools of design. Interesting developments are the rise at the Calcutta institution of a new school of Indian painting, which combines Indian treatment of subjects with western technique, and the foundation of an architectural branch in the institution at Bombay. But much remains to be done in connection with the indigenous art industries. This matter requires careful expert consideration. The Government of India will address Local Governments on the subject and for the present content themselves with advocating the importance and urgency of preserving for, and in, India scientifically arranged collections of the products of its ancient and modern arts and crafts. The understanding and appreciation of eastern artwork in Europe and America is draining good specimens in increasing volume into the public collections of those continents.

Museums.

34. The relation of museums to the educational systems of India was discussed at the conference held at Simla in July 1911. Much valuable work has been done by the zoological and geological sections of the Indian Museum at Calcutta, which are now equipped on modern lines. The archæological section of the same museum has recently been re-organised under the direction of Mr. Marshall, Director General of Archæology. In provinces outside Bengal also there has been good progress in the right direction, but in the case of most local museums there is need of better equipment and a stronger staff. One of the most urgent needs in India is an ethnographic museum under scientific management designed to illustrate Indian civilisation in its varied phases. Otherwise students in the future will be compelled to visit the museums of Paris, Berlin, Munich and other places in order to study subjects, which should clearly be studied best on Indian soil. The Government of India will consult expert opinion on the subject; as at present advised they are inclined to favour the formation of a museum of Indian arts and ethnography at Delhi. Their accepted policy, though some overlapping is inevit-

able, is to develop local museums with special regard to local interest and to concentrate on matters of general interest in imperial museums. How to make museums more useful educationally and secure greater co-operation between museum authorities and educational authorities is a matter on which they have addressed Local Governments.

35. The present scheme of agricultural education originated under Lord Curzon's government and is, in fact, only seven years old. Previous to the year 1905, there was no central institution for research or teaching and such education as was then imparted in agriculture was represented by two colleges and three schools, in a more or less decadent condition. Very few Indians then had any knowledge of science in its application to agriculture and still fewer were capable of imparting such knowledge to others. In the year 1905 a comprehensive scheme was evolved under which arrangements were made both for the practical development of agriculture by government assistance and also for teaching and research in agriculture and subjects connected with it. A central institution for research and higher education was established at Pusa. The existing schools and colleges were reconstituted, improved and added to. Farms for experiments and demonstration were started, and as time went on, a change was effected in regard to agricultural education in its earlier stages. As now constituted the scheme of agricultural education has three main features, *viz.*, (*a*) the provision of first class opportunities for the higher forms of teaching and research, (*b*) collegiate education, and (*c*) the improvement of secondary and primary education. *Agricultural education.*

36. The institute at Pusa, maintained at a cost of four lakhs a year, has 37 Europeans and Indians on its staff, engaged partly in research, partly in post-graduate education and the instruction, through short courses, of students or agriculturists in subjects which are not regularly treated in provincial institutions. There are now six provincial institutions containing over 300 students and costing annually between five and six lakhs of rupees. Practical classes for agriculturists have also been established at various centres in several provinces. In the ordinary elementary schools, formal agriculture is not taught; but in some provinces a markedly agricultural colour is given to the general scheme of education.

37. Veterinary research is carried on at the Bacteriological Laboratory at Muktesar. The scheme of veterinary colleges has been thoroughly reorganised since 1904. There are now four such institutions, with 511 students, as well as a school at Rangoon. These institutions meet fairly well the growing demand for trained men. *Veterinary education.*

38. The college at Dehra Dun has recently been improved; and a research institution has been established in connection with it. Indians can here obtain an education in forestry which approximates to that ordinarily obtainable in Europe. *Forestry education.*

39. Instruction in the western system of medicine is imparted in five recognised colleges and fifteen recognised schools in British India. These now annually produce between six and seven hundred qualified medical practitioners. A medical registration Act has recently been passed for the presidency of Bombay, under which passed students of such schools are entitled to become registered; and a similar Act is now under consideration in the presidency of Bengal. In Calcutta there are four self-constituted medical schools, the diplomas of which are not recognised by the Government of India. Among recent developments may be mentioned the establishment of an X-ray institute at Dehra Dun, and the formation of post-graduate classes in connection with the Central Research Institute at Kasauli. These latter include training in bacteriology and technique and preparation for special research; classes of practical instruction in malarial technique are also held twice a year at Amritsar under the officer in charge of the malarial bureau. *Medical education.*

40. Other projects are engaging the attention of the Government of India, including the institution of a post-graduate course of tropical medicine. The practical want of such a course has long been felt; and the Government of India are now in communication with the Secretary of State regarding its establishment in the Medical College at Calcutta. The Calcutta University have expressed their willingness to co-operate by instituting a diploma

to be open to graduates who have taken the course in tropical medicine. A scheme for a similar course in Bombay is also under consideration. The Government of Madras have submitted a scheme for the construction of a pathological institute and the appointment of a whole-time professor of pathology with a view to improve the teaching of that subject at the Madras Medical College. Other matters which are likely to come to the front at no distant date are the improvement of the Medical College at Lahore and its separation from the school, the improvement of the Dacca Medical School and the provision of facilities for medical training in the Central Provinces.

41. The subject of medical education is one in which the Government of India are deeply interested. It is also one that may be expected to appeal with special force to private generosity. A problem of particular importance is the inducement of ladies of the better classes to take employment in the medical profession and thus minister to the needs of the women, whom the *purda* system still deters from seeking timely medical assistance. One of the hindrances hitherto has been that Indian ladies are able to obtain instruction only in men's colleges or in mixed classes. With a view to remedying this defect and commemorating the visit of the Queen-Empress to Delhi, certain of the princes and wealthy landowners in India have now come forward with generous subscriptions in response to an appeal by Her Excellency Lady Hardinge, who has decided to merge in this project her scheme for a school for training Indian nurses and midwives. The Government of India are considering proposals to found a women's medical college and nurses' training school at Delhi with the help of a subvention from government. Proposals are also under consideration for assisting the National Association for supplying female medical aid to the women of India (the Countess of Dufferin's Fund) to improve the position of their staff.

Legal education.

42. There has been a marked development of legal education in the last decade. First it has been concentrated. In 1901 there were 35 institutions, colleges, classes and schools, containing 2,800 students. At the present time there are 27 institutions with a slightly larger number of students. The Madras and Bombay presidencies, Burma and the Central Provinces each possess a single institution; and in Bengal the instruction for the degree of bachelor of law has been restricted to certain colleges, although other institutions are still recognised for the pleadership examination. A law college has been established on a liberal scale under the University of Calcutta. This concentration has resulted in greater efficiency and greater expenditure. In 1901 the cost to government was a little over Rs. 7,000 and the total cost was $1\frac{1}{4}$ lakhs. At present the cost to government is over Rs. 45,000 and the total cost over Rs. 2,83,000. Secondly, the courses have been remodelled and in some cases lengthened. The Government of India will be glad to see an extension of the policy of concentration and improvement. They also desire to see suitable arrangements made for the residence and guidance of law students.

Commercial education.

43. There has recently been a considerable expansion in commercial education. Nine years ago there were ten colleges with less than 600 students, and government spent less than Rs. 4,000 upon these institutions. At the present time there are 26 institutions, three of which are under the management of government, the enrolment is now over 1,500 and the expenditure from provincial funds is over Rs. 22,000. The standard attained in the majority of these institutions is not, however, high, and the instruction given in them prepares for clerical duties in government and business offices rather than for the conduct of business itself. A project for a commercial college of a more advanced type in Bombay has been sanctioned and the Government of India are considering the question of making arrangements for organised study of the economic and allied sociological problems in India.

University education.

44. Good work, which the Government of India desire to acknowledge, has been done under conditions of difficulty by the Indian universities; and by common consent the Universities Act of 1904 has had beneficial results; but the condition of university education is still far from satisfactory, in regard to residential arrangements, control, the course of study and the system of examination. The Government of India have accordingly again reviewed the whole question of university education.

45. It is important to distinguish clearly on the one hand the federal university, in the strict sense, in which several colleges of approximately equal standing separated by no excessive distance or marked local individuality are grouped together as a university—and on the other hand the affiliating university of the Indian type, which in its inception was merely an examining body, and, although limited as regards the area of its operations by the Act of 1904, has not been able to insist upon an identity of standard in the various institutions conjoined to it. The former of these types has in the past enjoyed some popularity in the United Kingdom, but after experience it has been largely abandoned there; and the constituent colleges which were grouped together have for the most part become separate teaching universities, without power of combination with other institutions at a distance. At present there are only 5 Indian universities for 185 arts and professional colleges in British India besides several institutions in Native States. The day is probably far distant when India will be able to dispense altogether with the affiliating university. But it is necessary to restrict the area over which the affiliating universities have control by securing in the first instance a separate university for each of the leading provinces in India and secondly to create new local teaching and residential universities within each of the provinces in harmony with the best modern opinion as to the right road to educational efficiency. The Government of India have decided to found a teaching and residential university at Dacca and they are prepared to sanction under certain conditions the establishment of similar universities at Aligarh and Benares and elsewhere as occasion may demand. They also contemplate the establishment of universities at Rangoon, Patna and Nagpur. It may be possible hereafter to sanction the conversion into local teaching universities, with power to confer degrees upon their own students, of those colleges which have shown the capacity to attract students from a distance and have attained the requisite standard of efficiency. Only by experiment will it be found out what type or types of universities are best suited to the different parts of India. *Affiliating and teaching universities.*

46. Simultaneously the Government of India desire to see teaching faculties developed at the seats of the existing universities and corporate life encouraged, in order to promote higher study and create an atmosphere from which students will imbibe good social, moral and intellectual influences. They have already given grants and hope to give further grants hereafter to these ends. They trust that each university will soon build up a worthy university library, suitably housed, and that higher studies in India will soon enjoy all the external conveniences of such work in the west. *Higher studies.*

47. In order to free the universities for higher work and more efficient control of colleges, the Government of India are disposed to think it desirable (in provinces where this is not already the case) to place the preliminary recognition of schools for purposes of presenting candidates for matriculation in the hands of the Local Governments and in case of Native States of the durbars concerned while leaving to the universities the power of selection from schools so recognised. The university has no machinery for carrying out this work and in most provinces already relies entirely on the departments of public instruction, which alone have the agency competent to inspect schools. As teaching and residential universities are developed the problem will become even more complex than it is at present. The question of amending the Universities Act will be separately considered.

48. The Government of India hope that by these developments a great impetus will be given to higher studies throughout India and that Indian students of the future will be better equipped for the battle of life than the students of the present generation.

49. The chiefs' colleges advance in popularity. In developing character and imparting ideas of corporate life they are serving well the purpose for which they were founded. They are also attaining steadily increasing intellectual efficiency, but the Committee of the Mayo College, Ajmer, have decided that it is necessary to increase the European staff. The post-diploma course has on the whole worked satisfactorily and there is now a movement on foot to found a separate college for the students taking this course. Such a *Chiefs' colleges.*

college may in the future become the nucleus of a university for those who now attend the chiefs' colleges.

50. The grave disadvantages of sending their children to England to be educated away from home influences at the most impressionable time of life are being realised by Indian parents. The Government of India have been approached unofficially from more than one quarter in connection with a proposal to establish in India a thoroughly efficient school staffed entirely by Europeans and conducted on the most modern European lines for the sons of those parents who can afford to pay high fees. No project is yet before them, but the Government of India take this opportunity to express their sympathy with the proposal and should sufficient funds be forthcoming will be glad to assist in working out a practical scheme.

Training of teachers.

51. Few reforms are more urgently needed than the extension and improvement of the training of teachers, for both primary and secondary schools, in all subjects including, in the case of the latter schools, science and oriental studies. The object must steadily be kept in view that eventually under modern systems of education no teacher should be allowed to teach without a certificate that he is qualified to do so. There are at present 15 colleges and other institutions for the instruction of those who will teach through the medium of English; these contain nearly 1,400 students under training. There are 550 schools or classes for the training of vernacular (mainly primary) teachers; and their students number over 11,000. The courses vary in length from one to two years. The number of teachers turned out from these institutions does not meet the existing demand and is altogether inadequate in view of the prospects of a rapid expansion of education in the near future. The Government of India desire Local Governments to examine their schemes for training teachers of all grades and to enlarge them so as to provide for the great expansion which may be expected, especially in primary education.

52. As regards training colleges for secondary schools some experience has been gained. But the Government of India are conscious that the subject is one in which a free interchange of ideas based on the success or failure of experiment is desirable. The best size for a practising school and the relations between it and the college, the number of students in the college for which the practising school can afford facilities of demonstration without losing its character as a model institution; the nature of, and the most suitable methods of procedure in, practical work; the relative importance of methodology and of psychological study; the best treatment of educational history; the extent to which it is desirable and practicable to include courses in subject-matter in the scheme of training, especially courses in new subjects such as manual training and experimental science; the points in which a course of training for graduates should differ from one for non-graduates; the degree to which the body awarding a diploma in teaching should base its award on the college records of the student's work—these and other unsolved questions indicate that the instructors in training colleges in different parts of India should keep in touch with each other and constantly scrutinize the most modern developments in the west. Visits made by selected members of the staff of one college to other institutions and the pursuit of furlough studies would seem especially likely to lead to useful results in this branch of education.

Pay and prospects of the services.

53. The Government of India have for some time had under consideration the improvement of the pay and prospects of the educational services, Indian, provincial and subordinate. They had drawn up proposals in regard to the first two services and approved some schemes forwarded by Local Governments in regard to the third, when it was decided to appoint a Royal Commission on the public services of India. The Government of India recognise that improvement in the position of all the educational services is required, so as to attract first class men in increasing numbers, and while leaving questions of reorganisation for the consideration of the commission are considering minor proposals for the improvement of the position of these services. They attach the greatest importance to the provision for the old age of teachers, either by pension or provident fund. Teachers in government institutions and, in some areas, teachers in schools managed by local

bodies are eligible for these privileges. But it is necessary to extend the provision in the case of board and municipal servants and still more in the cases of teachers of privately managed schools, for the great majority of whom no such system exists. It is not possible to have a healthy moral atmosphere in any schools, primary or secondary, or at any college when the teacher is discontented and anxious about the future. The Governor General in Council desires that due provision for teachers in their old age should be made with the least possible delay. Local Governments have already been addressed upon this subject.

Education of the domiciled community.

54. The defective state of the education of the domiciled community has long been remarked. Many suggestions have from time to time been made for its improvement. An influential committee, presided over by Sir Robert Laidlaw, is now collecting funds for the schools of all denominations except Roman Catholic schools. As in the case of secondary English education and for similar reasons the policy has been, and is, to rely on private enterprise guided by inspection and aided by grants from public funds. The Government of India have never had any intention of changing their policy. But in order to discuss the whole question and to obtain definite practical suggestions of reform they assembled an influential conference at Simla last July.

55. The recommendations of the conference were numerous and far-reaching. The Government of India are prepared to accept at once the view that the most urgent needs are the education of those children who do not at present attend school and the improvement of the pay and prospects of teachers. They are also disposed to regard favourably the proposal to erect a training college at Bangalore with arts and science classes for graduate courses attached to it. They recognise that grants-in-aid must be given in future on a more liberal scale and under a more elastic system. They will recommend to Local Governments the grant of a greater number of scholarships to study abroad. The proposals to re-classify the schools, to introduce leaving certificates, to include in courses of instruction generally hygiene and physiology, special instruction in temperance and the effects of alcohol on the human body, and the several other detailed proposals of the conference will be carefully considered in the light of the opinions of Local Governments when they have been received.

56. The suggestion was put forward and largely supported at the conference that European education should be centralised under the Government of India. This suggestion cannot be accepted. Apart from the fact that decentralisation is the accepted policy of government, the course of the discussion at the conference showed how different were the conditions of life of members of the domiciled community in different parts of India, and how these differences necessarily reacted on their educational arrangements. The Government of India are convinced that although some difficulties might be removed, more would be created, by centralisation.

Education of Muhammadans.

57. The figures and general remarks contained in this resolution are general and applicable to all races and religions in India, but the special needs of the Muhammadans and the manner in which they have been met demands some mention. The last nine years have witnessed a remarkable awakening on the part of this community to the advantages of modern education. Within this period the number of Muhammadan pupils has increased by approximately 50 per cent. and now stands at nearly a million and a half. The total Muhammadan population of India is now 57,423,866 souls. The number at school accordingly represents over 16·7 per cent. of those of a school-going age. Still more remarkable has been the increase of Muhammadan pupils in higher institutions, the outturn of Muhammadan graduates having in the same period increased by nearly 80 per cent. But while in primary institutions the number of Muhammadans has actually raised the proportion at school of all grades among the children of that community to a figure slightly in excess of the average proportion for children of all races and creeds in India, in the matter of higher education their numbers remain well below that proportion notwithstanding the large relative increase. The facilities offered to Muhammadans vary in different provinces, but generally

take the form of special institutions, such as *madrassas*, hostels, scholarships and special inspectors. The introduction of simple vernacular courses into *maktabs* has gone far to spread elementary education amongst Muhammadans in certain parts of India. The whole question of Muhammadan education, which was specially treated by the commission of 1882, is receiving the attention of the Government of India.

Oriental studies.

58. The Government of India attach great importance to the cultivation and improvement of oriental studies. There is increasing interest throughout India in her ancient civilisation, and it is necessary to investigate that civilisation with the help of the medium of western methods of research and in relation to modern ideas. A conference of distinguished orientalists held at Simla in July 1911 recommended the establishment of a central research institute on lines somewhat similar to those of L'Ecole Française d'Extrême Orient at Hanoi. The question was discussed whether research could efficiently be carried on at the existing universities; and the opinion predominated that it would be difficult to create the appropriate atmosphere of oriental study in those universities as at present constituted, that it was desirable to have in one institution scholars working on different branches of the kindred subjects which comprise orientalia and that for reasons of economy it was preferable to start with one institute well-equipped and possessing a first class library. The Government of India are inclined to adopt this view and to agree with the conference that the central institute should not be isolated, that it should be open to students from all parts of India and that it should as far as possible combine its activities with those of the universities of India and different seats of learning. The object of the institute as apart from research is to provide Indians highly trained in original work who will enable schools of Indian history and archæology to be founded hereafter, prepare *catalogues raisonnés* of manuscripts, develop museums and build up research in universities and colleges of the different provinces. Another object is to attract in the course of time *pandits* and *maulvis* of eminence to the institute and so to promote an interchange of the higher scholarship of both the old and the new school of orientalists throughout India. But before formulating a definite scheme the Governor General in Council desires to consult Local Governments.

Preservation of the ancient learning.

59. While making provision for scholarship on modern lines, the conference drew attention to the necessity of retaining separately the ancient and indigenous systems of instruction. The world of scholarship, they thought, would suffer irreparable loss if the old type of *pandit* and *maulvi* were to die out before their profound knowledge of their subjects had been made available to the world; and encouragement rather than reform was needed to prevent such an unfortunate result. Certain proposals for encouragement were made at the conference, *viz.*,—

(*a*) grants to Sanskrit colleges, *madrassas*, *tols*, *pathshalas*, *maktabs*, *pongyi kyaungs* and other indigenous institutions in order to secure better salaries for teachers and to enable students by fellowships or scholarships to carry their education to the highest point possible;

(*b*) the appointment of specially qualified inspectors in orientalia;

(*c*) the provision of posts for highly trained *pandits* and *maulvis*;

(*d*) the grant of money rewards for oriental work.

The Government of India hope to see the adoption of measures that are practicable for the maintenance and furtherance of the ancient indigenous systems of learning and have called for proposals from the Local Governments to this end.

Experts required.

60. The functions of local bodies in regard to education generally and their relations with the departments of public instruction are under the consideration of the Government of India. But it is clear that if comprehensive systems are to be introduced expert advice and control will be needed at every turn. The Government of India propose to examine in communication with Local Governments the organisation for education in each province and its readiness for expansion. A suggestion has been made that the director

of public instruction should be *ex-officio* secretary to government. The Government of India agreeing with the great majority of the Local Governments are unable to accept this view, which confuses the position of administrative and secretariat officers; but they consider it necessary that the director of public instruction should have regular access to the head of the administration or the member in charge of the portfolio of education. The Government of India wish generally to utilise to the full the support and enthusiasm of district officers and local bodies in the expansion and improvement of primary education; but the large schemes, which are now in contemplation, must be prepared with the co-operation and under the advice of experts. A considerable strengthening of the superior inspecting staff, including the appointment of specialists in science, orientalia, etc., may be found necessary in most provinces. In Madras an experienced officer in the education department has been placed on special duty for two years to assist the director of public instruction to prepare the scheme of expansion and improvement in that province, and the Government of India would be glad to see a similar arrangement in all the major provinces should the Local Governments desire it.

Interchange of views.

61. In the resolution of 1904 it was stated that arrangements would be made for periodical meetings of the directors of public instruction in order that they might compare their experience of the results of different methods of work and discuss matters of special interest. The Government of India have already held general conferences at which the directors attended and they are convinced that periodical meetings of directors will be of great value. While each province has its own system it has much to learn from other provinces, and, when they meet, directors get into touch with new ideas and gain the benefit of the experience obtained in other provinces. The Government of India are impressed with the necessity not only of exchange of views amongst experts, but also of the advantages of studying experiments all over India on the spot; and in a letter of the 7th July 1911, they invited Local Governments to arrange that professors of arts and technical colleges and inspectors of schools should visit institutions outside the province where they are posted, with a view to enlarging their experience.

Conclusion.

62. Such in broad outline are the present outlook and the general policy for the near future of the Government of India. The main principles of this policy were forwarded to His Majesty's Secretary of State on the 28th September 1911, and parts of it have already been announced. It was, however, deemed convenient to defer the publication of a resolution until the whole field could be surveyed. This has now been done. The Governor General in Council trusts that the growing section of the Indian public which is interested in education will join in establishing, under the guidance and with the help of government, those quickening systems of education on which the best minds in India are now converging and on which the prospects of the rising generation depend. He appeals with confidence to wealthy citizens throughout India to give of their abundance to the cause of education. In the foundation of scholarships; the building of hostels, schools, colleges, laboratories, gymnasia, swimming baths, the provision of playgrounds and other structural improvements; in furthering the cause of modern scientific studies and especially of technical education; in gifts of prizes and equipment, the endowment of chairs and fellowships, and the provision for research of every kind there is a wide field and a noble opportunity for the exercise on modern lines of that charity and benevolence for which India has been renowned from ancient times.

PROGRESS

OF

EDUCATION IN INDIA

1907–1912

PROGRESS

OF

EDUCATION IN INDIA

1907-08—1911-12

CHAPTER I.

INTRODUCTORY.

Scope of the review.

The present review deals with education in an area of more than a million square miles and among 255 millions of people. That is to say, the survey is confined to about two-thirds of the sub-continent of India—the British provinces and most of the native States which are in political relations with them. It does not treat of all of the latter, nor with any of the States which are in direct political relations with the Government of India; nor do the figures include those for the small areas of British territory administered by political officers—though a short chapter is devoted to education in special areas. The map which fronts this volume illustrates the scope of the review. Further details will be found in supplemental table no. 1.

The period covered is from April the 1st, 1907, to March the 31st, 1912. It is important to bear in mind that a census of the population was made in 1911. The introduction of a new set of population figures is an element for which allowance must be made when statistics are compared.

The report deals with provinces as they stood during the quinquennium. On April the 1st, 1912, Eastern Bengal was absorbed into the new presidency of Bengal; Bihar and Orissa and Assam were constituted as new provinces.

Plan of the review.

2. The compilation of a review of education in India offers certain difficulties. Despite a certain similarity of organisation, there is considerable variation of system in each province. Wide racial differences complicate the problem. It is unsafe to make assertions of general application without specifying exceptions. It is wearisome to drag the reader through a separate recital for each of ten territorial units. Again, the review must serve both for the general reader who asks only an outline and also for the student who requires details of some special aspect of education. At the risk of some repetition, details regarding general college and school education, the training of teachers, etc., as well as full information about some of the courses, grant-in-aid rules and like matters have been thrown into the form of appendices. But this device can effect only a moderate curtailment of the narrative; the characteristics of provinces must still find mention; and, in chapters that deal with special education, some description of individual institutions is inevitable. There is another difficulty. The review deals with different stages of instruction and also with education among different communities. In these circumstances a certain amount of repetition is unavoidable, since an incident or an institution demands notice in different connections.

3. The form of previous reports has, so far as possible, been followed. In addition to the new appendices, two new general tables have been introduced. The number of supplemental tables has been cut down. New chapters have been added on oriental studies and education in agencies, etc. To place the reader in closer contact with the subject, and as a substitute for descriptions

of school-houses which can have only local application, some illustrations of school and college life and buildings have been included in the first volume. These have been produced at the Thomason Engineering College, Roorkee, under the supervision of Lieutenant-Colonel E. H. de V. Atkinson. These are intended to serve as samples—not as an exhaustive record.

Previous reviews have been criticised on the ground that their authors merely described and expressed no opinion. The present writer trusts that he has succeeded in imitating the example of self suppression and incurring the same charge. The review-maker must of necessity be first a chronicler and only very sparingly a commentator.

Assistance in compilation.

4. The reports on which the present review is based are the work of the following officers :—

Madras	The Hon'ble Sir Alfred Bourne, K.C.I.E., D.Sc., F.R.S.
Bombay	Mr. R. D. Prior, M.A.
Bengal	Mr. M. Prothero, M.A.
United Provinces . . .	The Hon'ble Mr. C. F. de la Fosse, M.A.
Punjab	The Hon'ble Mr. J. C. Godley, M.A.
Burma	Mr. J. G. Covernton, M.A., F.R.N.S.
Eastern Bengal and Assam . .	Mr. J. N. Roy.
Central Provinces and Berar . . .	Mr. A. G. Wright, M.A.
North-West Frontier Province .	Mr. J. A. Richey, M.A.

With the exception of Mr. Prior, Mr. Prothero and Mr. Roy, these gentlemen are the directors of public instruction in their respective provinces; and Mr. Prior was officiating in that capacity. The provincial reports furnish the material without which any adequate review would be impossible. The universities have also provided valuable reports. A heavy debt is due to the compilers of previous reviews for the models they have provided and the lines of thought they have suggested. The writer is also under a deep obligation to the directors of public instruction for having perused the more important chapters in proof, to the Hon'ble Mr. Gait for assistance in the section on literacy and in the chapter on backward classes, to Dr. Venis and Dr. Ross for valuable suggestions in the chapters on oriental studies and Muhammadan education, and to Mr. Meikle, Actuary to the Government of India, for the calculation made in appendix XVII and for aid in chapter VIII. The sections dealing with agriculture, forestry and veterinary science have been contributed by the Department of Revenue and Agriculture and that relating to medical education by the Director General of the Indian Medical Service. Much assistance, especially in seeing the work through the press, was also rendered by Mr. Kaye and Mr. Chakrabarti of the Department of Education.

5. After the review had been written certain corrections of the Bengal figures were received. These are mostly unimportant and hardly affect the figures for India as a whole and no attempt has been made to incorporate them in the statistics of this review. A list of the corrections is given in appendix I.

CHAPTER II.

EVOLUTION OF POLICY.

I.—Early policy.

Pre-British system of education.

6. The British found not a system of education, but a number of educational institutions, already established in the more settled parts of India. There were seats of Sanskrit learning, as in Nadia, of Arabic learning, as at Khairabad and Jaunpur. There were less celebrated *tols* and *madrassas*. And there were the elementary *pathshalas* and *maktabs*. An authentic account of these, as they existed in Bengal, has been left by Mr. William Adam, originally a missionary, who was appointed government commissioner of education in 1835. He found that Burdwan, which he considered the most advanced district visited, contained only 931 schools (in 1910 it contained 1,470 primary schools), and that in one district the percentage of teachable children at school as ascertained over one of its *thanas* was 2·5 per cent. There were no indigenous schools for girls. Thirteen years before, the Madras presidency was believed to contain 12,498 schools. The schools, as shown in Mr. Adam's reports, were miserable places. The house, if there was one, cost from Rs. $1\frac{1}{4}$ to Rs. 10. The teachers were poor and ignorant. Nearly all were regularly paid in fees or in presents; but the average professional income was found, in the districts visited, to be just short of Rs. 3 a month. The use of printed books was unknown. The compositions taught inculcated a low standard of morality. As to discipline, the school was a place of terror, if we may judge from the recognised methods of truancy and the deterrent nature of the punishments, one of which was to tie up the offender in a sack with nettles, a cat or " some other noisome creature " and roll it along the ground.* These are the institutions on which the existing system has been largely grafted. The process still continues of converting the indigenous *pathshala*, the Koran school and the *pongyi kyaung* into an efficient place of elementary instruction.

Beginnings of education in British period.

7. The East India Company did not at first assume responsibility for education. Such improvements as were effected in elementary schools were the work of individuals (often, but not always, missionaries) and private associations. A few names stand forth—Bell and Lancaster, the originators of the pupil-teacher system, in Madras; Adam and David Hare (the latter a retired watch-maker), in Bengal. The efforts of these men and of bodies such as the Calcutta School Society were enthusiastic. But the task was immense, and the organisations for tackling it were limited, scattered and lacking in cohesion.

Similarly the beginnings of higher education were due to the efforts of individual officials, enlightened Indians, missionaries and successful adventurers. In 1782 Warren Hastings established, and thereafter for a time maintained, the Calcutta Madrassa for the study of Arabic and Persian. In 1791 Mr. Duncan, the Resident of Benares, founded at that place a Sanskrit college, locally endowed and " designed to cultivate the literature and religion of the Hindus." In the next year the Muhammadans of Delhi, and early in the nineteenth century the Borahs of Surat, built themselves Arabic colleges. A part of the fund established by the Peshwas for the support of *pandits* was utilised by the Commissioner of the Deccan to initiate and support a college at Poona for Hindu learning. These early foundations had in view the study of the oriental classics and the ancient lore. But the feeling of the enlightened—at least among the Hindus—soon declared itself in favour of the vernaculars, English and occidental thought and science. The Calcutta Vidyalaya was founded in 1817 by private effort for the education in English

* Adam's Reports on Vernacular Education in Bengal and Bihar, by the Reverend J. Long, pages 10, 156 and elsewhere; also The Calcutta Review, Volume II, 1844, which gives a vivid description of Education in Bengal and Bihar mainly founded on Adam's Reports.

of children of the higher castes. The Hooghly College, supported from the Mohsin Fund, comprised English and oriental departments. The foundation by the Bengal Committee of the Calcutta Sanskrit College was opposed by Raja Ram Mohan Roy and others as retrogressive in tendency. Schools on more or less modern lines were opened at Agra and Delhi. The Poona College was saved by Mountstuart Elphinstone through the introduction of vernacular and English and the opening of its doors to other than Brahmans. The tendency in favour of western culture found expression in Macaulay's Minute and realisation in a rapid growth of modern institutions. For these, missionary and official efforts were responsible. The former had previously concentrated on conversion. The Baptist College (1818) at Serampur had combined instruction in the tenets of Christianity with the study of Sanskrit and Arabic. Bishop's College (1820) was, and still is, for the reception of Christian students. The idea of conversion, however, yielded to that of education. The General Assembly's Institution of the Church of Scotland (1830) and the London Missionary Society's Institution (1838) were founded in Calcutta; the Christian College (1837) and St. Joseph's College (1844) at Negapatam, in Madras; the Wilson College (1834) in Bombay. These were quickly followed by Government colleges. In Bengal there were Dacca (1841), Krishnagar (1845) and Berhampore (1853); while in 1855 the Presidency College absorbed the Calcutta Vidyalaya. In 1841 the " Madras University " was started—at first a high school, now the Presidency College of Madras. The similar institution in Bombay, originating with a private endowment in 1827, was organised as the Elphinstone Institution in 1840. Meantime there were private organisations for the instruction of Europeans and children of mixed descent in the larger cities. These were supported by bequests and subscriptions. Captain Doveton (of the Nizam's service) endowed the Doveton College in Calcutta. General Claud Martin (who had been in the service of the King of Oudh) founded the Martinière Colleges at Calcutta and Lucknow.*

Growth of demand for vernacular and English education.

8. From the tangled history of those early times three movements detach themselves—the rapid growth of the demand for English education, the gradual acceptance of responsibility by government, the tardy recognition of the importance of elementary as opposed to higher education. In the first instance, government—or rather individual officials—had founded institutions for the study of the traditional classics. But, even before the abolition (permitted under Act XXIX of 1837) of Persian as the language of judicial and revenue proceedings, interest had been aroused in the cultivation of the vernaculars and a knowledge of English had come to be recognised as the high road to preferment and the door to the treasury of western knowledge. In the institutions designed to give oriental teaching the pupils had to be retained by stipends; in schools where English or the vernacular was taught the majority paid fees. Furthermore, there was a genuine desire for modern culture. Raja Ram Mohan Roy, in the course of his protest to Lord Amherst against the establishment of a Sanskrit school, had written in 1823, " If it had been intended to keep the British nation in ignorance of real knowledge, the Baconian philosophy would not have been allowed to displace the system of the schoolmen, which was the best calculated to perpetuate ignorance. In the same manner the Sanskrit system of education would be the best calculated to keep this country in darkness, if such had been the policy of the British Legislature." The controversy culminated in Macaulay's brilliant Minute and Lord Bentinck's resolution of 1835, which directed efforts and funds to the promotion of European literature and science; the places of oriental learning were to be retained, so long as there was a demand for them, their professors were to be paid, but not their students. Macaulay has sometimes been misunderstood. He appears to have advocated English for the few, and the consequent improvement of the vernaculars (and enrichment of their literatures) for the many. Instruction in English and the number of English-teaching institutions have outstripped his ideal; and there has not been commensurate improvement or output in the vernaculars. The possible dangers of this development were early observed. Commenting on the despatch of

* Fourth Quinquennial Review (Nathan), pp. 43—45; and Howell's Education in British India, pp. 1—21.

1859, Raja Radhakanta Deb wrote, "Nothing should be guarded against more carefully than the insensible introduction of a system whereby, with a smattering knowledge of English, youths are weaned from the plough, the axe, and the loom, to render them ambitious only for the clerkship for which hosts would besiege the Government and mercantile offices, and the majority being disappointed (as they must be), would (with their little knowledge inspiring pride) be unable to return to their trade, and would necessarily turn vagabonds." The evil is not wholly imaginary. But it is often exaggerated. Justice has not been done to the vernaculars. But no system that could have been invented would have been faultless. The free introduction into higher institutions of western thought and of the English language has probably been productive of considerably more good than harm; and perhaps it was inevitable.

Recognition of education as a function of the State.

9. "Education in India under the British Government," says Howell, "was first ignored, then violently and successfully opposed, then conducted on a system now universally admitted to be erroneous, and finally placed on its present footing." The early settlers were traders. Only gradually the pendulum swung round from commerce to administration. But education was hardly looked on as a part of the administrator's duty. It was regarded, even in the England of those days, as the proper sphere of private enterprise. The task in India was of deterrent magnitude. And the activities of mission bodies caused great alarm to government. Societies arose—the Calcutta School Book Society in 1817, founded with a view to supplying the lack of vernacular books; the Calcutta School Society, founded for the improvement of existing schools and the establishment of new ones. The Marquess of Hastings was president of the latter society. And government was gradually drawn into participation in educational management. The Charter of 1813 had permitted the Governor General in Council to apply a sum of not less than one lakh of rupees in each year to "the revival and improvement of literature, and the encouragement of the learned natives of India, and for the introduction and promotion of a knowledge of the sciences among the inhabitants of the British territories in India." The despatch of 1814 which announced the grant (the first educational despatch of the Court of Directors) showed that the "sciences" referred to were oriental sciences—the many excellent systems of ethics contained in the Sanskrit language, "with codes of laws and compendiums of the duties relating to every class of the people," tracts of merit "on the virtues of plants and drugs" and many other things the study of which "might do much to form links of communication between Indians and European officials." Some organisation was required—if only to disburse the grant. A General Committee of Public Instruction was at last constituted in Bengal (1823) containing ten members of the civil service; another was established in Madras. The former was replaced in 1842 by the Council of Education; a similar change took place in Madras. In Bombay there was a Board of Education. The Bengal Council of Education, however, merely looked after special institutions. The bulk of the educational institutions were placed under the general department of the Government of India. In 1843 educational control in the North-Western Provinces was transferred to the new government at Agra. Finally in the despatch of 1854 its responsibility for education was emphatically brought to the notice of the administration, the need of extension and systematic promotion was affirmed, and the lines of a definite policy were laid down.

Slow growth of elementary education.

10. Nor was it till the same date that the unsoundness was realised of the doctrine that education can be trusted to permeate downwards. It was a comfortable policy—especially at a time when the slender resources of civilisation were confined to the large cities. Outside these oases lay a desert of which little more was known save its vastness and its sterility. The funds available being inadequate for any purpose of general education, it was laid down as a principle by the Committee of Public Instruction, that the best application of them would be to high education "which was of course out of the reach of the masses and only attainable by the few." Moreover the professional and clerkly classes, already thirsting for English education, were close to the doors of the administrations and could make their wants known. It was both easy and pleasant to provide them with higher institutions of learn-

ing. But outside these favoured spots there was little. Notwithstanding the existence of village schools, the best contemporary authority (and the same who estimated the number of those schools in Bengal and Bihar) was pessimistic. "I am not acquainted," wrote Adam, "with any facts which permit me to suppose that, in any other country subject to an enlightened government, and brought into direct and immediate contact with European civilisation, in an equal population, there is an equal amount of ignorance with that which has been shown to exist in this district." This was written of Bengal, the advanced area of India, and in 1838, when much of Europe still lay under the darkness of mass illiteracy! The first organised attempt on a large scale was made by Mr. Thomason, Lieutenant-Governor of the North-Western Provinces. He found that "the people within his jurisdiction were extremely ignorant, that the existing means of education were very defective, less than five per cent. of the boys of school-going age received any instruction at all, and what they did receive was of a very imperfect kind.* The same story had been reiterated from every province in India. Mr. Thomason was foremost in establishing a system of circle schools supported by a local cess. His scheme was incomplete when he died in 1853. In the next year the policy of mass education was emphatically announced.

The despatch of 1854.

11. Sir Charles Wood's despatch of 1854 marked out the foundations on which the edifice of Indian education has since been reared. Education was henceforward to be the care of the state, as it had already become in the North-Western Provinces. Mr. Thomason's scheme had included the appointment of a Visitor General on £1,200 a year, to be filled by a civilian. An inspectorship had been created for Bengal in 1844. There were three inspectors in Bombay. Now the Boards and Councils of education were to be set aside in favour of an educational department organised as a portion of the machinery of government in the several presidencies. The key-notes of the system were to be utility and diffusion. Eastern science and philosophy were recognised as abounding in grave errors; eastern literature as deficient with reference to modern discovery and improvement. Erudition in such subjects might serve as an auxiliary. The general extension of education was to aim at spreading the improved arts, science, philosophy and literature of Europe. This object was to be effected by means of the English language in the higher branches of instruction and by that of the vernacular languages for the great mass of the people. Special emphasis was laid on anglo-vernacular instruction, the study of the local vernacular in combination with English, and translations into the native languages calculated "so to combine the substance of European knowledge with native forms of thought and sentiment as to render the schoolbooks useful and attractive." The kinds of institutions in which instruction was to be imparted were minutely indicated. The oriental schools were not to be abolished but to be placed on such a footing as might make them of greater practical utility. Universities were to be established at Calcutta and Bombay (a proposal for such an institution in the former city had been made in 1845 by the Council of Education and rejected). Readiness was also expressed "to sanction the creation of an University at Madras or in any part of India, where a sufficient number of institutions exist, from which properly qualified candidates for degrees could be supplied." The model was to be the London University. The affiliated institutions were to be periodically visited by government inspectors. Schools, destined to make of their pupils more useful members of society, were to be established throughout India; and these also were to be "subject to constant and careful inspection." The provision of such schools was regarded as, if possible, more important than that of universities and colleges. And the imparting of correct elementary knowledge to the great mass of the people was described as of special moment. The example of Mr. Thomason was held up for imitation, the lethargy of Bengal and Madras in this respect was lightly censured. Special instruction was to be encouraged. Faculties of law and engineering were foreshadowed in the universities. Institutions like the Thomason College of Civil Engineering at Roorkee (founded in 1847), like the Medical Colleges of Calcutta (founded in 1835) and Bombay, and like the Madras School of industry and design and the art school projected by Sir Jamsetjee Jeejeebhoy at Bombay, were to be

* Howell's Education in British India, p. 47.

established elsewhere. The training of teachers was to be carried out through the selection of pupil-teachers, their encouragement by stipends, the drafting of them into normal schools and the grant of certificates. And the profession of schoolmaster was to afford inducements such as were offered in other branches of the public service. Sympathy was expressed for the cause of female education and for the growing desire of the Muhammadans to acquire European knowledge. A system of scholarships was to set up a ladder from one grade to another. But the intention of these scholarships was to be practical. They were to be devoted largely to instruction in teaching, medicine and engineering. The encouragement of the mere acquisition of learning by "young men of ability, but of slender means," was to be left to endowments and private benevolence. As to management and finance, it was recognised that, in view of the vast population and the paucity of available funds, insuperable difficulties beset the extension, within any reasonable time, of the present system of education by means of institutions entirely supported at the cost of government. With the agency of the state must be combined "the aid which may be derived from the exertions and liberality of the educated and wealthy natives of India and of other benevolent persons." Accordingly reliance was to be placed mainly on a grant-in-aid system. The conditions of aid were to be :—(*i*) adequate local management by private patrons, voluntary subscribers or trustees of endowments, willing to superintend the school and ensure its permanence for a given time, (*ii*) government inspection, (*iii*) adherence to the conditions laid down for such grants, and (*iv*) the requirement of some fee, however small, from the scholars. The insistence on fees (save in normal schools) was prompted by the belief that it would render education more valuable, thus stimulating exertion and attendance, and by considerations of finance. The system of aid was to be applied to higher institutions, to anglo-vernacular and vernacular schools which imparted a good elementary education, and to raising the character of the indigenous schools. In the case of these last it was felt that minute and constant local supervision would be specially necessary. Where private management proved sufficient, government was not to found new schools; and the time was anticipated when many of the existing institutions could be transferred from government to local bodies under the control of, and aided by, the State. "But it is far from our wish," runs the despatch, "to check the spread of education in the slightest degree by the abandonment of a single school to probable decay; and we therefore entirely confide in your discretion, and in that of the different authorities, while keeping this object steadily in view, to act with caution, and to be guided by special reference to the particular circumstances which affect the demand for special education in different parts of India." Finally, with almost nervous exactitude, the relation of the government was defined towards religious beliefs. In government institutions, the education imparted was to be exclusively secular. The system of grants-in-aid was to be based on an entire abstinence from interference with the religious instruction conveyed in the school assisted. Inspectors were to take no notice whatever of the religious doctrines taught in aided institutions. And universities were to affiliate institutions conducted by all denominations, provided they afforded the requisite courses of study and due guarantees for the conduct of the students.

Permanency of policy of 1854.

12. A brief survey of the events previous to 1854 and a careful study of the despatch of that date are necessary to an understanding of educational policy in India. Events have occurred to modify but not sensibly to change the system then outlined. In some respects anticipations have been disappointed. Private effort has not to any extensive degree advanced elementary education. Too little attention has been bestowed upon vernaculars. The practical side of higher school education has not been effectively developed. In some respects the policy then laid down has not been fully endorsed by experience. Too little encouragement was vouchsafed to oriental studies. Discontent is expressed at the secular character of instruction—though private schools have taken but slight advantage of their freedom, and though a safer rule is still to seek. In some respects the doctrines then in vogue have fallen into disrepute. Affiliating universities have been condemned. Pupil teacher systems have ceased to inspire confidence. In

other respects the despatch has proved incomplete. Its financial policy was vague. It overlooked the claims of the domiciled community. It made no provision for the education of native rulers and the highest classes. But the foundations remain the same, with little alteration. The edifice has followed the architect's plans, with but few additions.

Land-marks subsequent to 1854.

13. The land-marks in the history of Indian education subsequent to 1854 may be briefly indicated. In the year of the mutiny (1857) the universities of Calcutta, Madras and Bombay were founded. The Punjab University was incorporated in 1882; that of Allahabad in 1887. Lord Stanley, in a despatch of 1859, reaffirmed the policy of 1854 with but few modifications. In 1882 a Commission surveyed progress and made recommendations. In 1901 Lord Curzon directed his energies to the subject of education and summoned a conference. One of its fruits was the Indian Universities Commission of 1902. Many of the views of that Commission were embodied in the Indian Universities Act of 1904—a hotly opposed measure, which regularised the constitution of the governing bodies and tightened the control of the universities over their affiliated colleges. Another was an expert travelling committee to advise on technical education. A third was the bestowal of renewed and increased attention upon mass education. The fixed policy of the government was reaffirmed and elaborated in the resolution of March the 11th, 1904. And, within the next few years imperial grants were assigned aggregating eighty lakhs of rupees (£533,000) a year, for university, technical, European, and (chiefly) elementary education. At the close of 1910 the value assigned to educational development was indicated by the creation of a special department in the Government of India, and the disbursement (early in 1911) of a special non-recurring grant for educational purposes of over ninety lakhs of rupees (£600,000). At the Coronation Durbar of December the 12th, 1911, His Imperial Majesty the King-Emperor caused to be announced a new recurring grant of fifty lakhs (£333,000) for popular education in recognition of its paramount importance, while other considerable grants have followed in quick succession.

II.—Characteristics of policy.

Lines of evolution.

14. It remains to indicate some of the main features of policy, and the general lines of their evolution since 1854. This can be done only in the broadest outline. The details, especially those of the most recent developments, will be found in the succeeding chapters. But the subjects of legislation, management, finance and instructional system must for a moment be regarded—partly from a historical outlook—with a view to a clear understanding of the present condition of affairs.

Absence of legislation :—

15. Perhaps the most striking trait in the Indian system is the lack of legislation. There are the Universities Acts (II, XXII and XXVII of 1857, XIX of 1882, XVIII of 1887, VIII of 1904, and XI of 1911). The Municipal and Local Self-Government Acts provide for the raising of local cesses (partially to be applied to education), define the powers and duties of local bodies as regards the establishment and maintenance of schools and regulate their relations with the departments of education. There is a Reformatory Schools Act. And, for the kindred subjects of archæology and museums there are the Preservation of Ancient Monuments Act and the Indian Museum Act. But this is all, and it amounts to little. For the rest there are rules and regulations under the Acts and provincial codes issued by the various administrations. There is no education law in the proper sense of the term. There is no compulsion on teacher or pupil. The system is entirely voluntary.

(a) for registration of schools and teachers.

16. On the one hand, it is open to any one to establish a school. There is no law for the registration of schools or teachers. This feature contrasts with the practice in the continental countries of Europe and in some of the British colonies. There is still a mass of institutions (the so-called "private" institutions) which have no connection with the existing system. These are largely semi-religious schools and exist peaceably side by side with the more modern places of study. A visit from the inspecting officer is generally welcomed; and frequently the school improves under his advice and comes within the pale of aided or at least of recognised institutions. In default

of any general law, continued inefficiency on the part of the teachers or management is met by withdrawal of grant, of scholarship-rights and of recognition for purposes of presenting candidates at any public examination. In the case of colleges, affiliation is granted or withdrawn under law and regulations, by the government concerned, on recommendation from the senate of the university. The recognition of schools for presentation of candidates at matriculation is granted and withdrawn by the syndicates of the universities—save in the case of Madras, where these acts are performed by government. There remains the case of schools established where they are not required in unfair competition with existing institutions, and those deliberately set up in defiance of the existing system. The former have sometimes, under a mistaken policy of toleration and encouragement, earned recognition to the detriment of educational interests; when such recognition is denied, they quickly die.

17. On the other hand, it is incumbent on no one to send his children to school. Elementary education has recently been made compulsory in the native State of Baroda, at first over a limited area, then over the whole state. This development is still admittedly in an experimental stage. The question of introducing into British India a similar measure, coupled with free elementary education, was raised by the Hon'ble Mr. Gokhale in the Imperial Legislative Council early in 1910. A year later Mr. Gokhale introduced a Bill for making the adoption of compulsion permissive for municipal and district board authorities, provided the numbers actually at school reached a percentage (to be fixed by the Governor General in Council) of the children of a school-going age within the locality in question, and provided the Local Government concurred in the application of the Act to that particular area. The measure was to be applicable separately to boys and girls. The Bill was introduced but was rejected a year later after an interesting debate at the second stage. It was held that the mass of opinions which had been collected in the *interim* condemned the Bill as a practical measure, and that it was premature for an agricultural country where the demand for education was still slender. While a large body of educated opinion favoured the measure and there was a general desire for the spread of education, there was no display of willingness to defray the cost; and the most thoughtful condemned the Bill as premature and likely to retard progress. An account of the main provisions of the Bill and the principal arguments advanced on either side will be found in paragraphs 294—296 of this volume.

(*b*) *for compulsion of pupils.*

18. A few words must be said here regarding the events which have led up to the system of administration and finance to be described later in this review. The general policy of relieving the state of the management of schools was laid down in 1854. The despatch of 1859 did not pronounce so clearly on the subject and contemplated the increase, where necessary, of the number of government institutions. The question was discussed at length by the Commission of 1882; and the policy was upheld (given efficient control) notwithstanding a large amount of evidence against the wisdom of the withdrawal of government management. In 1900 the Secretary of State reminded the Government of India of the necessity of government control, guidance and assistance in higher teaching, and indicated the desirability of maintaining a certain number of government schools. The Royal Commission of 1908 on Decentralisation in India doubted the propriety of local bodies maintaining and managing high and other English-teaching schools; they considered that "secondary education should be in the hands of government." In some provinces the system of management by private bodies has been to a certain extent discredited by departure from the definition given in 1854 of a managing authority, the growth of schools run by private individuals on money-making lines, and insufficient control. Nevertheless, government have adhered to the policy of encouraging privately managed schools under suitable bodies, maintained in efficiency by government inspection, recognition and control, and by the aid of government funds. This devolution of authority has been made in the case of higher institutions mainly to private associations—missionary and otherwise; in the case of elementary institutions mainly to municipalities and district boards which can either maintain their own schools or make grants from their funds to privately managed

Administrative machinery.

schools. The idea of municipal government in India is as old as 1687; and in that year the erection of a school-house (but apparently only one) was regarded as among the functions of such a body. Effective municipal administration and the extension of the principle of election date from the latter half of the last century, especially from Lord Ripon's viceroyalty and the Acts of 1883-1884. Primary education is now regarded as an obligatory duty of municipalities. Similarly, a system of board administration in the rural areas was established by the Local Self-Government Acts of 1883-1885; and the bodies thereby created (varying considerably in constitution for different parts of the country) have extensive functions in connection with elementary education. The Royal Commission on Decentralisation proposed the confinement of the efforts of local bodies entirely to primary schools and the further devolution of educational functions to rural boards, sub-district boards and *panchayats*, the grant of reasonable latitude to sub-district boards to settle the curricula, the maintenance by local bodies of their own inspecting staffs (in addition to the government inspectorate) and the abrogation of rules requiring those bodies to devote specific percentages of their revenue to education. These recommendations are under consideration. But the important fact remains that government superintends but does not manage educational institutions. Exceptions are certain colleges, special institutions, primary schools where there is no other satisfactory agency for their maintenance, and a few secondary schools intended to maintain the standard of instruction and discipline. In 1870-71 government institutions and pupils numbered 10,304 and 461,818 respectively, those under non-government management 72,748 and 1,433,005. To-day, government has 1,991 institutions containing 187,726 pupils, non-government institutions number 134,341 and their pupils 5,940,999. General superintendence and the staffing of the few government institutions are provided for by educational services, of which a description will be found in chapter IV. In Madras, the United Provinces and the provinces now comprised in Bengal and Bihar and Orissa a portion of the inspecting staff was until recently paid and controlled by the district boards. The entire inspecting staff has now been handed over to government.

Financial policy.

19. It has been stated that the charter of 1813 permitted the appropriation of a lakh of rupees annually for purposes of education. But, save for its reliance on private resources, the despatch of 1854 prescribed no financial policy. The despatch of 1859 repaired this omission by laying down as a principle the imposition of a local rate (being a fixed proportion of the annual value of land) for purposes of elementary education. This was followed by the Cess Acts for Sind (1865), Madras (1866), Bombay (1869), the United Provinces and the Punjab (1871). There was considerable variety in these Acts. That for Bombay made compulsory a rate of $6\frac{1}{4}$ per cent on the land revenue. The forward condition of education in certain parts of that presidency has sometimes been ascribed to this measure. In Madras, on the other hand, the imposition of a rate was *quasi*-voluntary, the inhabitants of an area being empowered to assess themselves for educational purposes. The result in the latter presidency was failure—no increase in the funds nor in the number of rate-schools; on the other hand, some closed, and it was remarked that there "can be little doubt that, if a free voice were allowed in several villages, a majority would elect the discontinuance of the schools." In Bengal the Act provided only for communications, not for schools. The permanent settlement offered a difficulty. Early statistics show that in this province and Madras the actual expenditure from public funds on elementary schools was far below one per cent of the land revenue (the standard generally adopted in other parts of India); while in Bengal not only was seven-tenths of this met from imperial funds, but the educational budget grant for all purposes was in large proportionate excess to the land revenue as compared with other provinces.* Meantime expenditure had grown, in 1866-67, to a total of just over 76 lakhs of rupees (taken for eleven months and exclusive of Burma). Of this, imperial funds contributed nearly 48 lakhs, receipts of Educational Committees, cesses, fees, private endowments, etc., 23 lakhs, and other private sources 5 lakhs.† In 1870-71 the

* Howell's Education in India, pp. 6 and 48.
† Howell's Education in India, table on p. 6.

system of provincial finance was initiated. Then came the legislation of the early eighties, which, among other things, changed the system of assessment. The elementary schools were handed over to the boards. On the whole the policy has been remarkably successful. There was a rapid advance in the number of schools and pupils, also in the amount of expenditure—though local funds in themselves have never been elastic. In ten years (1881-82 to 1891-92) total expenditure rose from 187 to 305 lakhs, an increase to which local funds contributed 68 lakhs. To-day the annual expenditure has reached Rs. 7,85,92,605 (£5,239,507), to which provincial funds contribute Rs. 2,69,58,808, local and municipal funds Rs. 1,35,64,264, fees Rs. 2,19,08,646, and other sources Rs. 1,61,60,887. During the last decade considerable grants have been made from imperial to provincial funds, more or less ear-marked for definite purposes. These gradually pass into provincial settlements.

General characteristics :—

20. The system of instruction and its developments under each branch will be described and discussed at considerable length in succeeding pages. At the present stage it is necessary only to indicate some very general traits of the matter taught and the method pursued. A haphazard system of elementary education has been replaced by an organised system. The old-fashioned system of oriental classics has been left as it was and very slightly subsidised. A totally new order of higher education has been introduced based on the western ideals of sixty years ago. The despatch of 1854 (assuredly one of the noblest of official documents) laid down the lines; and the lines have stood the test of time. It has already been indicated that they were not perfect. They were judiciously conceived, in accordance with the recognised needs of India and the educational ideas then prevalent in England. It was an era that viewed with satisfaction the affiliating university, venerated the examination system and inscribed on its altars the nothingness of aught on earth save man and of aught in man save mind. Time has widened the horizon and humanised the machinery.

(a) in higher education.

21. Higher education in India presents three broad characteristics. It is secular; it is utilitarian (though not practical); and it is conducted in English. The policy as regards religious teaching enunciated in 1854 was based on the apprehension of proselytisation. That apprehension no longer exists. The danger of "irreligious" education has been made manifest. A movement in favour of religious instruction has arisen among the educated. Experiments are being made. But the adequate solution of one of the most difficult of our problems is probably not yet in sight. The high school and the college are the natural path to government and professional employ; and examinations have been the natural portals. The scale on which these examinations must be conducted is very large. The scope of such examinations is limited. And these circumstances in turn have imposed limits on the course. For the subject that does not lend itself to the test comes to be neglected or excluded from the course when the certificate is the end and aim. Courses have accordingly often been framed with a view to facility and fairness of examination and lacking in those elements which go to make up what does not tell in an answer-paper—character, practical adaptability and reasoning power. The text-book, too, has not always been chosen with a consideration for the environment and the mental plane either of the teacher or of the taught. There is an outcry that the courses are literary, and that a practical bent is needed in the high school, and also in the shape of technological institutions. Perhaps the argument in favour of the practical has sometimes been obscured by vagueness as to the meaning of the term. But the desire for a broader basis of instruction is slowly crystallising; and probably few will gainsay it, especially when the existence of higher institutions finds its justification no longer only in the need of public servants, but also in wider outlets of professional activity and culture. The statement is sometimes made that the Indian student is actuated by purely material motives. The statement is partially true of many students in all countries, but is not truer in the case of India than of elsewhere. Again, it is sometimes said that the bond between the ruling race and the ruled has been made the language of the former, and that this result is paradoxical. The assertion is incorrect, since it would limit administrative activity to the college class-room; and, even there, must be qualified by realisation of the facts that the Indian desires, and the government

has prescribed, a course of occidental study; and that it is not easy (though it might be advisable) to conduct this in languages which are not the natural vehicle of the thought to be expressed, and often in two or three of those languages simultaneously before the same audience.

If the examinational trend has limited the scope, it has affected still more the imparting of instruction. The cram-lesson and the key-book have received encouragement. The large influx into secondary and higher institutions, the necessity of cheap maintenance, and often the quantitative and qualitative defects of the staff have also contributed to the adoption of crude methods. In some areas and in some institutions discipline has been of the poorest. These facts have combined to foster in many quarters an unflattering opinion of English education in India. A point which is largely responsible for the opinion is the wastage which takes place as pupils ascend the standards. That such wastage should take place is explicable and also deplorable. But it is not fair to judge of a system by its unfinished product. The graduate is no discredit to Indian education.

(b) in elementary education.

22. The spread of useful and practical instruction among the masses has remained the principal feature of educational policy. The Court of Directors impressed its importance upon the central government, the central government upon the provincial administrations. Various causes have combined against the fulfilment of this aim—the loud claims of higher education, the lethargy of the lower classes, and the inferiority of the teachers. The middle classes desire higher institutions, the maintenance of whose efficiency demands the energies and the financial aid of the State. A great part of the masses have not been accustomed to education in the past and see little advantage from it in the present. Exemption from fees and compulsory attendance have been urged. The former is tried in some provinces without appreciable effect. The latter is a drastic measure to adopt towards a population which is not within reasonable distance of general literacy and large sections of which would resent such interference with liberty as an act of tyranny. Economic progress and the improvement of the school itself will probably of themselves commend a change of attitude. The most urgent improvement is the raising of the pay and status of the village teacher. M. Chailley, in his *Administrative Problems of British India*, has placed the mediocre quality of the primary schoolmaster as the first reason for the lack of reform. This, rather than defects of curricula, is probably responsible for the divorce of teaching from the practical issues of village life and the consequent want of popularity and of marked effect on literacy. The teaching of the '3 R's' and a little geography are generally combined with some study of the village maps and records and nature-study centring round the field, the crop and the cattle. These and mental problems in arithmetic are much appreciated. It remains that their teaching, already good in some schools, should be improved in the great majority.

Method has suffered from other causes besides the poor prospects of the teacher. Elementary education, too, long lay under the blight of ideals now regarded as obsolete or unsuitable—an oppressive examination system, the distribution of grants by examinational results, the importation of methods of infantile instruction unsuitable to the genius of the country. In the primary school, if anywhere, there should be no place for rigid tests; and the instruction should be imparted on indigenous lines adapted to modern requirements and to rational methods. When attention and inspection have not been relaxed or diverted to secondary education, good results have been obtained. There are many excellent primary schools in India. The improvement of the rest is a matter of money and care.

Removal of defects.

23. These few points—which, to those conversant with Indian education, will read as common-places—have been put forward to show the defects rather than the qualities of the system, especially those defects which may be regarded as its inheritance from the age that gave it birth and whose eradication has proceeded more slowly than in Europe. How consciousness of these defects has grown, and the steps taken to remedy them, will be shown later in this review. The preceding paragraphs have attempted to express certain generalities applicable to Indian education in general and do not attempt to treat of its specialised forms.

III.—General organisation.

24. It will be convenient here to touch briefly on the outlines of the system now prevalent in India, if only for the sake of defining the terms which occur in the forthcoming chapters. This may be done under the heads of management, finance and classification of institutions.

Management.

25. Government guides the policy and inspects, but does not own or manage colleges and schools. There are exceptions to the latter assertion; and they are important. For there are certain institutions which government alone can efficiently maintain, and others among which the maintenance of a limited number by government is wholesome. An account of the controlling agencies is given in chapter IV. For the most part, elementary schools are maintained by local bodies and private societies or individuals, secondary schools and colleges by private societies. Government also maintains some high schools and colleges, nearly all the training institutions for teachers, and the more important of such special institutions as deal with engineering, industry, medicine, agriculture, forestry, etc. Thus the vast majority of the ordinary places of instruction are in the hands of local bodies or private agencies. Government, however, inspects through its officers, prescribes the curricula (save when courses are subject to the universities) and apportions grants. And all the institutions which submit to inspection, follow the curricula and receive (or hope for) grant-in-aid, are termed public institutions. These are sub-divided as public institutions under public management—*i.e.*, management by government, or by a municipal or other local body such as a district board; and public institutions under private management—*i.e.*, management by a society, a committee, or an individual. In addition, there are private institutions—those which have not accepted departmental or university standards and do not submit their pupils to any public test. The number of these is not very large and has slightly decreased in the past five years, though a small increase is visible in the pupils. The tendency is for the private school to enter the list of recognised schools and become a public institution under private management.

There are other agencies of control. The most important of these are the universities. These are incorporated bodies partially under the control of government but possessed of a large measure of independence. Their influence is limited to colleges and high schools, for which they prescribe courses and hold examinations.

Finance.

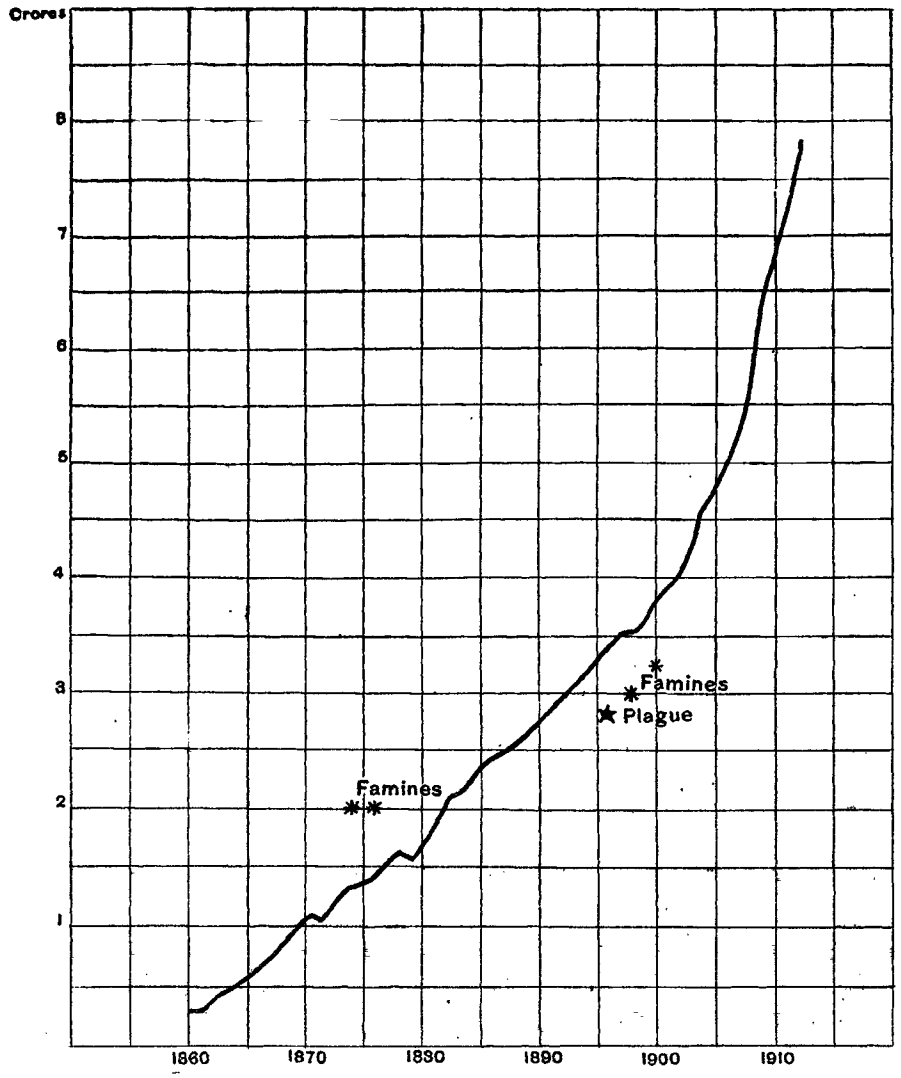
26. The total cost of the educational system is shared almost equally between public and private funds. By the former are meant provincial revenues and municipal or district board funds. Provincial revenues are the produce of the land revenue and of taxation, part of which is paid, under provincial settlements, into the imperial exchequer and part is retained by the Local Government. The portion paid to the imperial Government, enhanced by the produce of purely imperial heads of revenue (railways, irrigation, opium, etc.) is partly used for imperial charges, such as the army, and is partly given back in various ways to provinces. One of these ways is the occasional distribution of sums for set purposes, such as education or sanitation. The Government of India are able to urge forward a general policy by thus making available to Local Governments the means for its accomplishment. The system has been questioned as tending to over-centralisation. The Royal Commission on Decentralisation recommended in respect of these grants that the system must be maintained, provided that it involves no increase of administrative control by the Government of India, and that the views of Local Governments are taken as to the relative urgency of objects. They also remarked that objects should not always necessarily be the same in every province, and that recurring grants may gradually be converted into shares of growing revenue. Municipal and district or local boards levy cesses. As this source of income is generally insufficient for their needs, it is increased by Local Governments through equilibrium grants for general purposes (*i.e.*, grants calculated to square income with expenditure) and also special grants made for such purposes as expansion of education. A portion of the municipal or district fund is spent on education; and it is necessary to recollect that the fund is partly the produce of local cesses and partly contributions from provincial

revenues. In a word, the whole of the provincial expenditure on education is met from provincial revenues which are from time to time enhanced by imperial grants. Similarly, a large but indefinite portion of local fund expenditure on education is met from cesses; but these are very materially increased by grants, both general and special, from provincial revenues. The life history of an imperial assignment might be traced as follows. The Government of India allots a recurring sum to a Local Government for, let us say, elementary education. The sum is shown in the provincial budget as part of the provincial funds available for education. As primary education is mainly the affair of district boards, the larger portion of the sum is transferred as a special grant to the district funds, and distributed proportionately to each board. Part, however, may be kept for provincial expenditure on increases of the inspecting staff, on scholarships or schools for the training of elementary teachers necessitated by the enhanced educational activity of the boards. The boards probably spend the money in increasing the pay of existing teachers, founding new board schools, increasing grants to privately managed schools or aiding schools hitherto unaided.

Private funds are classed as fees, subscriptions, endowments and other sources. There is no need to add any further explanation. But the figures collected under these heads are necessarily of a somewhat uncertain nature.

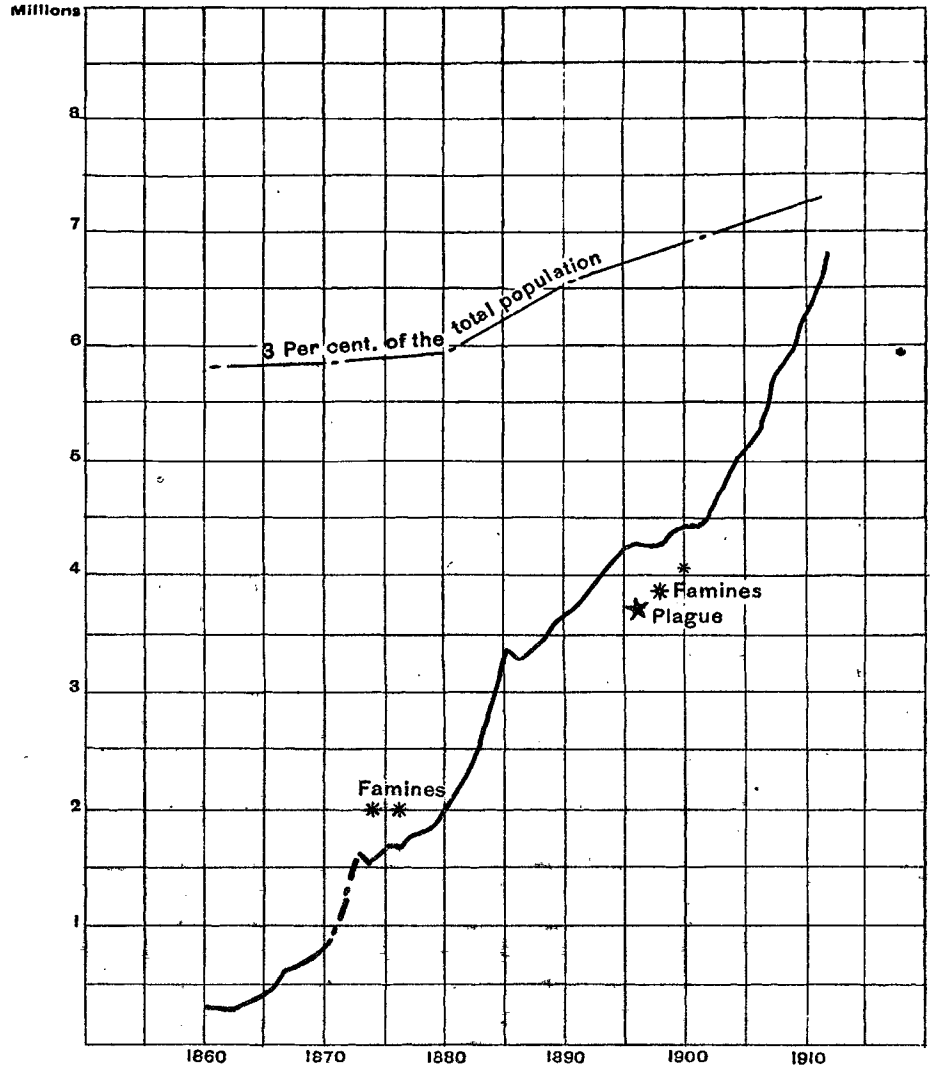
Classification of institutions.

27. The ordinary institutions are the following. First, the primary schools in which simple vernacular education is imparted. These are subdivided into lower primary or elementary schools and upper primary—that is, those which carry education a stage or two above the elementary. The great majority of schools are of the primary type. To these should be added vernacular middle schools which are classed as secondary in the tables, but are simply primary schools with continuation classes added, to serve the need of larger villages and also with a view to supplying youths of sufficient attainment to enter at once into vernacular normal schools. Second, the anglo-vernacular secondary school, which is divided into the anglo-vernacular or English middle school (in theory an incomplete high school lacking the top classes, but often of a deplorably inferior character), and the full high school teaching up to the matriculation or school final examination. In many parts of India a high school possesses the primary classes also; and a boy may undergo his whole school career from the infant class to the matriculation in the same institution. Third, there is the arts college, affiliated to one of the universities and offering a course of four years up to the bachelor's degree and a further course to the M.A. Some colleges have high schools attached to them. Besides these, which have been termed the ordinary institutions, there are special institutions, both of the collegiate and school grade, for law, medicine, engineering, teaching and agriculture; and there are schools of commerce, of industry, etc. Private institutions are partly religious or semi-religious schools, or teach Sanskrit, Arabic and Persian. But the majority of these institutions are very elementary schools teaching a vernacular, which hope, as they improve, to be placed on the recognised or aided list.



Expenditure on Education in India.

Zinco. August, 1913.—No. 860.-6000



Total number of pupils in all institutions in India.

Zinco August, 1913.—No. 860-1.-6000

CHAPTER III.

GENERAL PROGRESS.

I.—Statistical Progress.

28. The first noticeable feature of the quinquennium is the increase of pupils. In 1907 the number was 5,388,632. In 1912 it was 6,780,721 or nearly 26 per cent. larger. Compared with past periods the increase is large; compared with the population it is small. The school-going population has been calculated in India as 15 per cent. of the population. Doubts have recently been cast upon this conventional figure. The calculation depends upon the number of years which may be reckoned as representing a reasonable time for education, the ages which begin and end this period, and the proportion of the population which is at any time included between those ages. On the one hand, in a country which is tropical and sub-tropical, the proportion of the population contained in the earlier age-periods is larger than in cold climates.* On the other hand, where the bulk of the population is agricultural, the period of education is necessarily shorter than under more complicated social conditions, and the amount of education required is less. The actual time spent under primary instruction is, so far as the figures adduced in chapter VIII can show, 3·8 years. This period, however, cannot be taken as sufficient to secure permanent results; for the figures of literacy warrant the assumption that many of those who receive education relapse into illiteracy. The primary course (and this is all that need be considered) ordinarily occupies from five to six years; and the average age of school-life is from the completion of the fifth to the completion of the eleventh or twelfth year. These ages include (if we reckon to the end of the eleventh year) 13·7 per cent. of the population, (if we reckon to the end of the twelfth year) just below 16 per cent.† The old figure of 15 per cent. may therefore be taken as fairly correct. On this assumption only 17·7 of the population of a school-going age are now at school against 14·8 per cent. five years ago. If only pupils under primary instruction are taken, the percentage is still less.

Increase of pupils.

29. The increase of 2·9 in the percentage is large, especially when it is considered that the figure for 1907 is reckoned on the census total of 1901, that for 1912 on the census total of 1911, and that the latter total exceeds the former by over fourteen millions of souls. But the percentage in itself is very small. The reasons for this can be more suitably discussed in the chapter on primary education. The following are the increases in different provinces :—

Province.	Pupils at school (figures in thousands).		Percentage of increase.	Percentage of the total population at school.
	1907.	1912.		
Madras	1,007	1,280	27·1	3·1
Bombay	721	923	28·0	3·4
Bengal	1,269	1,610	26·9	2·9
United Provinces	606	712	17·5	1·5
Punjab	300	381	27·0	1·9
Burma	399	445	11·5	3·7
Eastern Bengal and Assam	816	1,075	31·7	3·1
Central Provinces and Berar	237	313	32·1	2·0
Coorg	5	7	40·0	3·9
North-West Frontier Province	29	35	20·7	1·6
Total	5,389	6,781	25·8	2·7

* G. Sundbärg : *Apercus statistiques Internationaux*, page 114.

† T. G. Ackland : *Report on the estimated age distribution of the Indian population as recorded at the Census of 1911*, page 36.

The percentage of increase is over 30 in three provinces. The figures of the last column fairly represent the educational condition of different provinces as set forth in this review.

In 1902 the percentage of those at school to the total population was 1·9, and in 1901 the percentage of literacy was 5·3. Now 2·7 of the population are at school; and in 1911 the percentage of literates was 5·9.

Another rough means of judging the advance of education is a consideration of the growth in the number of newspapers and periodicals. The number published in India in 1906 was 1,366. In 1911 it was 1,815. The increase has been much larger in the Bengals than elsewhere. It is less easy to speak of the circulation of these papers. Some of the new productions have a minute circulation; but that of the more popular papers has generally increased.

Increase in expenditure.

30. The total amount spent upon education has risen from Rs. 5,59,03,673 (£3,726,914) to Rs. 7,85,92,605 (£5,239,507). The figures for provinces are given below :—

Province.	Total amount spent on education.		Total increase.	Percentage of increase.
	1907.	1912.		
	Rs.	Rs.	Rs.	
Madras	97,64,358	1,35,65,102	38,00,744	38·9
Bombay	1,06,43,089	1,36,17,527	29,74,438	28·0
Bengal	1,16,63,468	1,72,02,434	55,38,966	47·6
United Provinces	74,89,580	1,07,92,838	33,03,258	44·1
Punjab	51,96,890	68,64,909	16,68,019	32·1
Burma	34,87,233	47,36,641	12,49,408	35·8
Eastern Bengal and Assam	51,24,074	80,46,361	29,22,287	57·1
Central Provinces and Berar	22,48,061	32,65,441	10,17,380	45·3
Coorg	49,166	72,854	23,688	48·2
North-West Frontier Province	2,37,754	4,28,498	1,90,744	80·2
Total	5,59,03,673	7,85,92,605	2,26,88,932	40·6

This represents expenditure from both public and private sources, which contribute to the total in about equal proportions. In 1912 the expenditure from public funds was just over four crores of rupees (nearly £2,700,000), distributed among provinces as below :—

Province.	Total amount met from public funds.		Total increase.	Percentage of increase.
	1907.	1912.		
	Rs.	Rs.	Rs.	
Madras	42,79,590	59,64,266	16,84,676	39·4
Bombay	56,78,537	74,88,139	18,09,602	31·9
Bengal	48,80,614	68,10,088	19,29,474	39·5
United Provinces	49,27,654	67,58,076	18,30,422	37·1
Punjab	32,12,136	38,75,550	6,63,414	20·7
Burma	22,08,949	26,87,601	4,78,652	21·7
Eastern Bengal and Assam	25,13,520	40,10,524	14,97,004	59·6
Central Provinces and Berar	17,40,596	25,65,517	8,24,921	47·4
Coorg	33,928	53,498	19,570	57·7
North-West Frontier Province	1,59,050	3,09,813	1,50,763	94·8
Total	2,96,34,574	4,05,23,072	1,08,88,498	36·8

The North-West Frontier Province easily leads the way in the increase both of total and of public expenditure. Eastern Bengal and Assam comes next. It is interesting to observe that in these two provinces, and in Madras, Bombay, the Central Provinces and Coorg public expenditure has increased more rapidly than total expenditure.

31. The quinquennium has witnessed the allocation of imperial grants for purposes of education. The amounts devoted to each branch of education will be stated in the appropriate chapters. The totals are as follows :— *Imperial grants.*

	Rs.	
Non-recurring grants allotted in 1911 . . .	90,17,000	
„ „ „ 1912 . . .	65,00,000	
„ „ „ 1913 . . .	3,19,00,000	
TOTAL .	4,74,17,000	(£3,161,133)

	Rs.	
Recurring grants allotted in 1912 . . .	50,00,000	for popular education.
„ „ „ 1912 . . .	10,00,000	for universities and secondary education.
„ „ „ 1913 . . .	55,00,000	for various kinds of education.
TOTAL .	1,15,00,000	(£766,667)

These figures include grants made shortly after the close of the quinquennium. The full effect of these allocations has not yet made itself felt in the general expenditure figures. Indeed, the actual distribution of the last non-recurring grant is being spread over three years. On the other hand, the grants made in 1905 and 1906 have played their part in facilitating progress during the period under review. The figures of this paragraph refer solely to imperial grants, not to the natural increase of provincial expenditure on education.

32. The average cost of educating a pupil has risen from Rs. 8-8-2 a year to Rs. 9-4-11. Out of this, public funds defray Rs. 4-11-9. The cost is highest in the Punjab (Rs. 14-11-8) and next highest in Bombay (Rs. 13-0-10). It is lowest in Eastern Bengal and Assam (Rs. 5-15-6). The most expensive institution is the professional college, where a pupil costs nearly Rs. 342. In an arts college the average expenditure is over Rs. 169, in a secondary school Rs. 23-10-3, and in a primary school Rs. 4-6-5. *Average cost of a pupil.*

33. The general advance of education in India during the last fifty years is illustrated in the diagrams which figure at the beginning of this chapter. These show the gradual rise in the number of pupils and the concomitant rise in expenditure. The figures of the earlier years are unreliable; the dotted line in the sixties and seventies represents transition to new and more complete methods of collecting statistical information. Freedom from famine in particular and generally the material prosperity of the country are important factors. The famines of 1874 and 1876, the severe famines of 1897 and 1900 and the advent of plague about the same time delayed progress to a considerable extent; while the 1886-87 depression was partially due to financial stress. The resolution of the Government of Bombay remarks that during the latter part of the period under review plague was responsible for the closure of 368 schools in two divisions alone. But the material prosperity of the country and the spread of education have been well maintained during the last decade. Since 1900 expenditure has increased by 109 per cent. and the number of pupils by 52 per cent. *Progress of the past fifty years.*

II.—Change in attitude of the people.

Growing interest in education.

34. The quinquennium has witnessed a remarkable realisation on the part of almost all classes of the growing importance of education. The movement in favour of denominational universities, the prominence which educational problems now assume on the platform and in the press, the debates in the imperial and local legislative councils and the introduction of a private bill for compulsory education—all these are symptoms pointing in the same direction, while growing numbers afford incontestible proof of enhanced demand. The Government of Bombay remark that the history of the period indicates " the presence among the people themselves of a growing disposition favourable to the reception of higher educational ideals and aspirations."

(a) in primary education.

35. Mr. de la Fosse says that perhaps the most notable event in connection with primary education " is the suddenly awakened interest in it manifested by the general public. If the zeal in some quarters somewhat outruns discretion, its existence is a sign of happy augury. The programme of extension called for by the Government of India should, if funds suffice for its realisation, certainly satisfy all but the most extravagant idealists." It is not unnatural that the cry for mass education emanates from classes already educated. The reports contain indications that practical efforts towards its realisation are not always commensurate with profession. The increase of pupils in secondary schools is comparatively greater than that in primary; and sympathy is largely centred on higher institutions. The Madras report speaks of apathy on the part of the Hindus towards the depressed castes. It is complained that some of the district boards have cut down their expenditure on education. Municipal committees in the Punjab take little interest in the elementary education of the masses and secondary schools claim the largest share of municipal expenditure on education in that province; and the conversion of a middle vernacular school into an anglo-vernacular school often arouses individual generosity. Rural courses which do not lead to English classes are unpopular.

(b) in higher education.

36. On the other hand, the rush into higher institutions (secondary schools and colleges) has been remarkable. The increase of pupils during the period has amounted to 47 per cent. The reports notice the insufficiency of existing facilities to cope with rapid expansion. In some provinces a limit of numbers has had to be fixed in government schools. In the Bengals the inadequacy of colleges to accommodate candidates for admission has proved embarrassing. Some interesting figures from the Punjab report regarding the numbers in secondary schools are quoted in paragraph 180 of this review.

Individual liberality.

37. Individual assistance, too, is displayed mainly in the case of higher or specialised studies. Education in India is not largely endowed. Sir A. Bourne complains of the lack of foundations for secondary schools. Exceptions are the generosity of the Tata family displayed in the establishment of the Indian Institute of Science at Bangalore and the liberal endowment of various institutions in the Bombay presidency. There are other exceptions; and the number of endowed fellowships, scholarships and prizes is by no means insignificant. Among instances of private liberality during or just after the quinquennium may be mentioned the response to the appeals for denominational universities, the gift of fifteen lakhs made by Sir T. Palit to the Calcutta University, the endowment of the Science Institute and Gujarat College and of the projected college of commerce in Bombay, a large donation for a university library at Calcutta, and (most striking of all) the collection of five lakhs among the frontier tribes for the establishment of an arts college at the border city of Peshawar. Reports mention other individual acts of generosity.

III.—General improvements.

Advance in policy.

38. Government has utilised the opportunity afforded by enhanced interest, the desire for better education and the growing sense that the basis of instruction has hitherto been too narrow. These have been the three guiding factors in such changes as have been initiated in organisation and in the handling of educational problems.

39. With the growth of education and the increased complexity of the questions it involves, a greater responsibility falls upon government and a larger portion of its attention is necessarily devoted to this side of administration. Accordingly, a separate department has been created in the Government of India, a department of public instruction has been organised in the North-West Frontier Province, the inspecting staff has been strengthened throughout the provinces and has received the status of a government service where it did not previously possess it. Large grants have been made for the expansion and improvement of institutions; and the administration of these funds will in itself demand a greater perfection in the machinery. The inspecting staffs of provinces are often too small to cope with the number of schools. Notwithstanding that they have been strengthened, the number of officers in some areas is still quite inadequate. With enlargement of the staff there has arisen the need for co-ordination of duties—a subject treated of in chapter IV. Administration tends to grow more involved, and this has necessitated, in some provinces, new methods of co-operation with civil officers. The growth of the subordinate inspecting staff demands increased supervision and threatens to be largely ineffectual unless means are adopted, through special training, to render it helpful rather than inquisitorial.

(*i*) *Increased responsibility of government.*

(*a*) *Improved organisation.*

A feature of some importance among the administrative changes of the period has been the devolution of powers to officers of the departments of public instruction. This is rendered necessary by the increasing volume of work. The measures of decentralisation generally relate to matters of routine and need not be detailed here. Among the more important of them is the power to appoint officers on higher rates of pay and to sanction building schemes up to a higher amount than was formerly permitted.

40. At the same time, steps have been taken to take the public into confidence in the framing of educational schemes. Sir Harcourt Butler, the first Member for Education in the Governor General's Council, based the initial operations of the department upon the advice of three conferences to which non-official representatives were admitted in large numbers. The first of these fittingly dealt with general problems of Indian education, the second with the improvement of oriental studies, the third with the education of the domiciled community. The proceedings of these conferences have been published in full and allusion is made to them in the preceding resolution and in the pages of this review. Nor is this all. Committees have been summoned for discussion in the provinces; and the quinquennium has been characterised by the number of its conferences. " Conferences," says Mr. de la Fosse, " have been throughout the chief means by which reforms have been initiated. Before making any step forward, it has been the practice to take stock of the situation and to confer with experts and others interested in education as to the plan of campaign." The questions of secondary and of industrial education in that province were considered by two conferences called at Naini Tal. This second question was also discussed at conferences held in Burma and in Eastern Bengal and Assam in 1909 and by a committee in the Punjab. Committees were summoned for the framing of the school leaving certificate scheme in Madras and of courses for European schools in the same presidency; for the revision of primary courses in Bengal, the formulation of proposals for a school final examination, and for the improvement of Muhammadan education, of the Presidency College and of the Calcutta Women's Training College, for the establishment of a technological institute in the same city and for the distribution of the imperial grants; on the question of rural education in the United Provinces; on the framing of a vernacular curriculum, on the reform of *madrassas* and on moral and religious education in Bengal and Eastern Bengal and Assam. A general conference, ordinarily attended both by officials and non-officials, was established in the Punjab in 1909 as an annual event. The first of these meetings dealt with the unification of primary curricula, the pay of village teachers, the simplification of the code, etc.; the second considered a draft revision of the school curriculum; the third dealt with more purely departmental subjects and was confined to departmental officers. An important development in Eastern Bengal and Assam has been the establishment, as a permanent body, of a Female Education Committee, which meets annually and is consulted by government on all

(*b*) *Non-official co-operation invited.*

questions affecting the education of girls. "In addition," says Mr. Roy, "to the formulation of large projects for the expansion and reform of girls' schools of all grades, the attention of this committee during the past three years has been directed to the inspection of schools, the discussion and prescription of better methods of teaching, the improvement of individual institutions, and the encouragement of study among girls and women by the formation of ladies' committees and the introduction of zenana teaching." These conferences have generally been largely attended by private individuals. Important schemes have been framed, and considerable progress has been made in carrying them out.

(ii) Improvement of institutions.
(a) State management.

41. The superiority of the public over the privately managed school was emphasised at the Allahabad conference of 1911. But the policy of entrusting higher education as far as possible to private agency is maintained. The recommendations of the Government of India made in 1906 included the establishment of a certain number of government high schools. The Decentralisation Commission advocated the transfer of English schools from local bodies to government. In the United Provinces, high schools have been made over from district boards to the State—considerably to the benefit of the institutions. In Burma a certain number of government high and middle English schools are being established; and it has been decided to bring under government management the municipal high schools at Bassein and Akyab. The Central Provinces administration has decided to play an active part in supplying secondary education in important centres. Part of the scheme put forward for the North-West Frontier Province is the provincialisation of municipal high schools, which has since been sanctioned. It has been found desirable to place under government management (with the full consent of the college authorities) the Gujarat College in Bombay and (just after the close of the period) the Morris College in the Central Provinces.

(b) Board schools and educational surveys.

42. The private management of primary schools has not proved successful. Their organisation is defective, their distribution uneven. Large portions of the country have been actually over-schooled; but the inefficiency and poor accommodation of the institutions rendered them unattractive. One of the most striking features of the figures quoted at the beginning of this chapter is the comparatively small increase of institutions, amounting (for those of all kinds) to only 8 per cent., against an increase in pupils of 26 per cent. In other words, an institution now educates 38 pupils against 33 pupils five years ago. This is particularly marked in the North-West Frontier Province, where an actual diminution of 212 schools has been accompanied by an increase of pupils amounting to over 20 per cent. and a large enhancement of expenditure. In Eastern Bengal and Assam, too, the increase of institutions has been insignificant, and the growth of pupils large. A more even distribution of schools is being observed; single good schools are being substituted for groups of overlapping and inefficient institutions; new schools are being established where none existed before. Board primary schools are more popular and are increasing at a more rapid rate than privately managed schools. The growing desire for instruction and the appreciation of more efficient institutions are evinced by the proportionately greater increase of pupils. The policy of government is a regular survey of the country with a view to a properly distributed provision of schools. The work has but now commenced. The figures of the quinquennium appear to justify considerable expectations from its execution.

(c) Privately managed institutions.

43. While the demand is for board primary schools wherever possible, endeavours have been made to improve privately managed institutions, whether of the higher or of the elementary grade, by means of grants. The grants-in-aid to elementary schools in Madras increased by 38 per cent. In the United Provinces the annual grants to aided colleges increased by 69 per cent., and nearly four lakhs were given for capital purposes; the annual grants-in-aid to schools teaching English rose by 32 per cent., and those to European schools by 55 per cent. For the whole of India the grants to colleges have increased by 19 per cent., to secondary English schools by 20 per cent., to middle vernacular schools by 21 per cent., to primary schools by 5 per cent. and to special schools by 69 per cent. The increase on the total expenditure is 15 per cent

The amount now annually disbursed from public funds to aided institutions is over 80 lakhs, and this sum excludes grants for capital purposes.

The matter in which privately managed institutions stand mostly in need is improvement of staff. In state schools the teachers are pensionable; in board schools they are sometimes pensionable and sometimes subscribe to provident funds. There are few measures which would contribute more substantially to securing a better type of teacher in privately managed schools than the establishment of some similar provision. Progress in this respect has been made during the quinquennium. In Madras the question of establishing a provident fund for teachers in privately managed institutions is under consideration and expenditure upon provident funds started by private managers is now recognised as a proper object of aid. Such funds have been established in various grades of institutions in the Punjab; contributions towards them are allowed to count as expenditure on tuition in secondary schools; they have been instituted for primary teachers in all districts. The Central Provinces administration has under consideration the establishment of a provident fund for teachers in aided schools. In the North-West Frontier Province a regular service of vernacular teachers has been formed. The Government of India have also addressed Local Governments generally on the subject.

44. Among improvements must be reckoned the provision of more suitable accommodation. There has been great building activity. Greater attention is being paid to the special requirements of educational buildings. The provision of houses for primary schools remains a problem. There is a tendency to adopt type-plans for this and other simple forms of school-houses. This has especially been the case in the United Provinces, where the designs include buildings for schools, hostels and manual training workshops. The buildings since erected are stated to have given satisfaction in all respects; and the existence of standard plans has effected great saving of labour. The reports from Bengal, the Punjab, Eastern Bengal and Assam and the North-West Frontier Province also speak of type-plans having been framed—mainly for primary schools. (*d*) *Buildings.*

45. It has more and more been recognised that the type of education followed by most pupils in India is narrow and deadening. The reaction against this state of things has taken different forms. The demand for industrial training and the reviving interest in oriental studies will be described in the chapters on those subjects. It is necessary here to deal at some length with the subjects of physical and moral training and briefly to mention the steps that have been taken to free study from the influence of a hard and fast examinational system. (*iii*) *Broader ideas of education.*

46. Greater attention to physical culture has been a feature of the quinquennium. Bengal has recently obtained a physical director from the United States. In the United Provinces much has been done for providing schools with proper playing grounds. The protective side of physical education has begun to receive attention in the Punjab, and a commencement has been made of systematic physical examination. This province has also a completely organised system of physical training and athletic competitions for schools; high schools have their teachers of athletics, vernacular schools are visited by peripatetic instructors in the employ of boards; tournaments are held, first in districts and afterwards at the headquarters of divisions. In the last year of the quinquennium a compulsory system of games was introduced into all government schools of the Central Provinces, together with the payment of a games fee to support the clubs. This is reported to be working well. The Madras report notices that an encouraging feature is the increasing ability of students to manage their games for themselves, while it is feared that most teachers still take but little interest in them. The same complaint is made about teachers in Bengal, who, " as a whole, do not appreciate the value of physical training for their pupils and do little for the better organisation of school games, much less take part in them themselves." Apart from this, there is no doubt great keenness evinced among college and secondary school pupils, and a considerable efficiency has been attained in athletics, while drill and *deshi kasrat* (country exercises) are regularly practised in almost all public institutions, both higher and primary. (*a*) *Physical and manual training.*

47. A word of warning has to be added, though it is apparently not applicable in all provinces, upon a danger which attends the introduction of western systems of athletics. Sir A. Bourne remarks that the institution of tournaments and cup ties by which it has been sought to encourage games has not been an unmixed benefit. "It has even produced an incipient professionalism which keeps the number of boys actually playing games comparatively small." Nor is Mr. Prior in favour of tournaments; the spirit of sport (he writes) is almost entirely wanting and the great crowds of schoolboys who witness the matches usually contain only a very tiny percentage of boys who have ever played the game themselves or ever will play it. While admitting that matters improve, and that matches end less frequently than before in inter-tribal warfare and stone-throwing, he is convinced that while the playing of organised games should be encouraged, the time has not come for tournaments between institutions to be played with moral profit to the boys. The Bengal report, too, complains of the spirit of professionalism which leads to the enrolment of boys in schools in order that they may be qualified to play in matches, and the over-emulation and excitement which sometimes result in acts of violence against the opposite party or their friends. The report from the United Provinces cites an instance in which the students of a normal school were summonsed by the team which they had defeated at hockey for assaults committed in the course of the game; "the case was happily compromised out of court, when it came to be understood that no malice lay behind the vigour of the attack." The same report states that it has been found desirable to abolish the tournament system altogether owing to the professionalism and unpleasantness which were engendered and from which, it appears, not even headmasters were altogether free. Its disappearance appears to have had no damaging effect upon enthusiasm. On the other hand, the fostering endeavours of the college staffs and of a university committee for inter-collegiate contests are said to have wrought improvement in athletics in the Punjab, where, in spite of occasional disturbances, a more friendly and sportsmanlike spirit is said to be growing up and there is no reason to question the beneficial effect of tournaments.

Professionalism and crude ideas respecting contests where party spirit may run high are dangers to be guarded against, and the latter is a not unnatural characteristic of the earlier stages of an implanted growth. But the taste for games in themselves is wholly good and the right spirit is growing. The average Indian student lives a healthy life when he has the opportunity. In some of the large towns his physical condition often leaves everything to be desired. Calcutta possesses over 8,000 college students and nearly 58,000 school pupils. Beyond the public parks, few of the institutions have playgrounds worthy the name. Many have none; others give the title to any small space that happens to be unoccupied in the compound.

48. Save for the beginning made in the Punjab, but little is done in the way of medical inspection. Simple hygiene lessons are generally included in vernacular text-books, and the subject sometimes figures as a separate one in higher schools. But the teaching is too often unreal. The Government of India have recently given Rs. 25 lakhs for educational hygiene, the provision of playgrounds, and kindred objects.

49. Manual training is being introduced as a part of the instructional system; but its introduction is slow. Mr. Prior says that this branch of a liberal education is still viewed with dislike and distrust; it is not regarded as any part of the stock-in-trade of a clerk, a graduate, a shop-keeper or a gentleman; all that the parent asks of the school is that it shall pass his son by any means through the requisite examination. Nevertheless manual training now forms an item in the course of some of the training institutions; manual classes are attached to some of the board schools in Bombay, *Sloyd* classes to selected schools in Burma, and two Local Governments have indented for manual instructors.

(b) Religious and moral instruction.

50. The question of religious and moral training has come prominently to the fore during the quinquennium. The attitude of government as regards religion has already been described as one of neutrality—abstention from teaching in public schools, abstention from interference with teaching in

privately managed schools. Certain concessions have been allowed. In the United Provinces the education code permits religious instruction for one hour a week to the children of parents who desire it, but the ordinary staff is to have nothing to do with the instruction. In the Punjab the code permits religious instruction on the premises of board schools out of school hours, provided that it is imparted in accordance with rules laid down by the local body, that the parents desire it, that no teacher in regular employ is compelled to teach, and that no charge for such instruction is paid from public funds. In 1909-10 religious instruction was permitted in state schools in Burma, where the great majority of the people are Buddhists and thus offer a fairly homogeneous field. The chief conditions imposed were the equal recognition of different faiths, the provision of instruction out of school hours, without compulsion and only at the request of parents or guardians, the separation of any fees collected for religious instruction from school fees, the approval of the selected teacher by the inspector and the prohibition of any religious ceremony, festival or public act of worship within the school precincts.

51. The results do not always confirm the reality of the outcry against a purely secular system. There are vast numbers of privately managed institutions of every grade where religious instruction has always been permitted and yet none has ever been imparted. In the United Provinces only five schools have taken advantage of the concession made in the case of government institutions. Mr. de la Fosse concludes that the middle-class parent is *parcus deorum cultor et infrequens*, and remarks the fact that, though by reason of the equal observance of the festivals of various religions no school boy in the world enjoys so many holidays as the Indian school boy, yet those who demand religious instruction have not thought of utilising these opportunities. It must, however, be remembered that the main declaration of government, dating as it does from a time which apprehended the dangers of proselytisation, is regarded as deterrent in the case of publicly managed schools, that in a matter like this the privately managed school is prone to follow suit, and that new orders take long to permeate the public mind. In Burma the idea of religious instruction is rendered familiar by its prevalence in monastic schools; and similar instruction, chiefly Buddhist (though representatives of other religions have equal rights of access to pupils of their faiths), is now given in sixty state institutions. The teachers are mainly members of the school staff and receive no special remuneration. The system is said to be working smoothly and to be productive of good—if only by weakening the belief that secular instruction is the only work of schools. Yet even here, though the concession was received with delight by those concerned and though parents are not apathetic, practical help from them is not forthcoming and there is a tendency to look to government for everything.

52. The influence of a long established principle, natural inertia and the habit of regarding a school as a machine to facilitate the passing of external examinations doubtless largely account for the contrast between inactivity and outcry. Nor is the demand universal. There can be no doubt of its widespread reality among Muhammadans. It is less general among Hindus. This was strikingly emphasised in the divergent opinions expressed at the Allahabad conference. One speaker averred that those brought up in the most orthodox manner often display the most unsettled minds; another cited an instance in which the introduction of religion as part of the school course had given rise to religious reaction and political propagandism; both these authorities considered such instruction to be impossible. Mr. de la Fosse observes that purely secular education is often regarded as the underlying cause of social, moral and political unrest, but that a perverted religious sense has quite as often been the cause of depravity. Mr. Godley warns against the too common assumption that the value of a school as a moral agency is secured by the inclusion of some form of religious teaching.

53. The changes in rule which have been noticed, the increase of denominational schools in the Punjab and the collection of funds for communal universities form the record of achievement during the quinquennium. This

does not amount to much. The time has rather been formative of opinion. However slowly it transforms itself into deed, there is no doubt a feeling abroad that respect for parents and teachers has waned, that the student's moral storehouse is often empty, swept and garnished and that it is consequently receptive of wild and irresponsible notions. The evil is symptomatic of transition—the conflict between the old and the new. The Government of India have suggested the calling together of committees in the different provinces to consider the matter.

Moral instruction presents less difficulty. The reading books commonly include moral lessons. Sometimes direct moral instruction is given. In Bombay a book of moral stories has been prepared for teachers. The difficulty lies with the staff. "The average teacher," says Mr. Godley, "has not the capacity for imparting direct moral instruction in such a way as to interest and impress his pupils." There are plenty of exceptions; and better recruitment and training will effect a change. Meantime, as one authority says, we must not attack the problem as if it were a case of laying on gas and water. "There are educationists of experience," says Mr. Prior, "who firmly believe that morality cannot with benefit appear upon a time-table, that it should permeate the whole curriculum, work, play and life of the school, and that at present we have not the necessary vehicular facilities for the 'imparting' of specific morality. Personally I believe rather in discipline, the example of worthy men, mental development (instead of memory-cramming), enlistment of parental co-operation, and in organised, manly games."

The hostel system.

54. One way of bringing order and good influence into the student's life is through the hostel system. "Owing to the unsuitability of many so-called guardians," says Mr. Prothero, "who are allowed to act *in loco parentis*, but who are often in no way connected with their wards and have no control over them, and the want of well qualified resident superintendents for the messes, it is hoped in time to establish sufficient college hostels to accommodate all students who do not live with their parents or natural guardians. Students require suitable accommodation, strict oversight, quietness for study, care in sickness, and freedom from domestic worries; and only in hostels can these wants be sufficiently supplied." The Lieutenant-Governor of the Punjab believes that a system of denominational hostels may meet the difficulty of religious instruction.

There has been a great increase in hostels during the period. There are now 2,796 hostels with 107,388 boarders; and the annual cost is Rs. 54,72,340 a year. The answering figures five years ago were 1,930 hostels, 78,412 boarders and Rs. 36,71,708. In the Central Provinces the increase of boarders in secondary schools amounts to 55 per cent. The Government of India have recently made grants for hostels, amounting to five lakhs recurring and Rs. 1,34,82,000 (£900,000) capital. The recurring expenditure is probably in the first instance being spent on buildings. But hostels require good superintendence; and money will be required to secure the latter.

The examination system.

55. The policy of Lord Curzon's government struck a blow at the system of excessive examinations in India. The only school examinations ordinarily recognised are the *in situ* test that closes the primary course and that which closes the complete school life. College life is still largely a preparation for university examinations. Opinion in some quarters continues to mourn the abolition of examinations at intermediate stages of the school career; here and there linger vestiges of the old system. On the whole, however, the change has undoubtedly been for good. The further problem of the nature of the test that should close the secondary school course has exercised the minds of educationists. It is recognised that the matriculations of the universities suffer from the difficulty of dealing with unmanageable numbers of candidates and from the defects inherent in external examinations. Bombay already had its school final examination, recognised for entrance to the public service but not to the university. Madras and the United Provinces have instituted systems during the period; also Burma and the Central Provinces, where, however, the attempt has not been attended with success. The object of these schemes (which will be described at

length in chapter VII) is to place the test in the hands of persons actually cognisant of the schools, to give due weight to the record of the pupil and to introduce oral and practical tests as an adjunct to written papers. Sir A. Bourne says of the system in Madras that the secondary school certificate records "not only the degree of success attained in a public examination, but also the work done in school for not less than three years, and the characters and aptitudes of the holders as manifested during the same period." The scheme is reported to have had great success and is described in the resolution of the Local Government as perhaps the most striking reform of the quinquennium.

IV.—Main events of the period.

56. The preceding section has indicated the main trend of development. The ensuing chapters will treat of education and its progress under various heads. In order to provide a synoptic view, some of the main events of the last five years (exclusive of those already mentioned) are recited below.

University and college education.

57. The continued effect of the legislation of 1904 has been visible in university and collegiate education. The exercise of the powers thereby conferred on the universities has added to the efficiency of the colleges. The universities themselves have been busied with (in some cases) the consolidation of the courses of study, with the initiation of teaching arrangements in post-graduate work, and with the provision of suitable buildings for their meetings, their libraries or their examinations. In the meantime, new ideals of university education have arisen which bode far-reaching changes in the future. The Hindus and the Muhammadans have proposed denominational universities at Benares and Aligarh. A scheme is being formulated for a teaching and local university at Dacca; and separate universities have been suggested elsewhere. The size of colleges has increased. The attainment of higher standards has added largely to their cost. Among single incidents the most striking is undoubtedly the movement for collegiate education among the frontier tribes. This has already taken a most practical form; and, at the opening of the buildings destined to grow into the Islamia College of Peshawar, Sir Harcourt Butler pointed out the deep significance of this event. "Standing here, on the most famous highway of Asia, facing the mouth of the Khyber Pass, I confess that my imagination is powerfully affected at the prospect of the enlightenment which will radiate from this school and college, not only in this province and along the frontier, but far into the recesses of Asia."

Secondary education.

58. Secondary education has developed along lines laid down in 1906 and generally reiterated in the foregoing resolution. The various Local Governments have, so far as funds were available, translated this policy into fact. Among the reforms now in progress none is more important than the improvement of the prospects of teachers in these institutions—whether by the framing of more favourable terms of service in government schools or by the enhancement of grant and the introduction of more elastic methods in its assessment for those under private management. In some provinces much has already been done in these directions; notably, the services have been improved in Bombay, the United Provinces, the Central Provinces, and the North-West Frontier Province. The demand for English education is increasing enormously and the number of pupils attracted by the higher efficiency of government institutions has in some places proved a source of embarrassment. Several provinces have substantially raised the fee rates in secondary schools and in colleges. This measure has had no apparent influence on numbers. The curriculum has been entirely revised in Eastern Bengal and Assam. The growth of systems of school leaving certificates or examinations in several provinces (notably Madras) has been an important feature of the quinquennium. Some of the reports complain of the adverse effects of the matriculation upon study and originality of method. The Bengal report also questions the standard of the matriculation; and the resolution of the Government of Bombay mentions indications that most of the colleges have been suffering from a plethora of immature first-year students induced by the unduly low standard of the matriculation, and supports the

view that, for purposes of the university, the high school course should be extended by at least one year. Though progress has been made in secondary education, much still remains to be done, and glaring defects have yet to be removed.

Primary education.

59. Apart from the interest exhibited in primary education, the main features of the period have been the reorganisation of courses in certain provinces, the establishment of the board school system in the districts of Eastern Bengal, and the complete abolition of fees in the North-West Frontier Province. The Government of India have requested that a portion of the grants made should be devoted to the extension of the principle of free elementary education. While rejecting the proposals for compulsory attendance at schools, they have urged the extension of facilities and a system of surveys which should place education of a simple kind within the reach of all who desire it; and they have emphasised their wishes in this matter by the provision of grants which will serve to facilitate a beginning in a more extensive and systematic distribution of institutions. While educational surveys are expected to produce a larger extension of elementary instruction, attempts are being made to improve the standard by fixing higher rates of pay for teachers, increasing the facilities for training and gradually enlarging the agency for inspection. How essential are these reforms and how futile would be a rapid and cheap expansion without such precautions is demonstrated by the fact that, even as things are, 39 per cent. of those educated relapse within a few years into illiteracy.

Professional and technical education.

60. Professional education has witnessed a certain amount of improvement and concentration in law classes and institutions. A new medical college has been opened at Lucknow; and a new departure is under contemplation at Delhi in the shape of a medical college for women. The agricultural college at Cawnpore has been developed and a new college opened at Lyallpur.

In 1911 the Indian Institute of Science opened at Bangalore. The numbers under technical and industrial education have steadily risen. The resolution of the Government of Bombay speaks of the remarkable progress made in this branch of education, especially in the school of art, where architectural and pottery sections have been developed. The resolution, however, complains that "there is a general lack of co-ordination between the courses and standards of the several technical institutions due to the absence of any effective controlling authority." A series of conferences in several provinces have framed correlated schemes of development, and departments of industry have been established. In 1912 a small committee travelled through India to enquire how technical institutions can be brought into closer touch and more practical relations with the employers of labour in India. A committee in England has examined the scheme under which about ten scholarships are awarded to Indians for the study of technical subjects in Europe. A college of commerce is projected at Bombay.

Training of teachers.

61. There has been considerable progress in the training of teachers. Every large province is now provided with one or more secondary training colleges, new additions during the period being in Bengal and Eastern Bengal and Assam, where previously facilities for this kind of training were entirely lacking; in the Central Provinces, where the institution has been developed into a college and in the United Provinces, where a second college has arisen at Lucknow.

Oriental studies.

62. The feeling that oriental studies had fallen into some neglect was recognised by the summoning of a conference at Simla in 1911. Meanwhile, attention has been paid to the subject in Madras and boards of examinations have done much to organise and encourage indigenous schools of study, especially in Bengal and the United Provinces.

Education of girls.

63. The number of girls at school has increased during the quinquennium by 47·7 per cent. The resolution on the Bombay report while remarking on the large numerical rate of increase says that there is an almost general opinion among educational officers that the real advance is incommensurate with the efforts and attention bestowed, and that the instruction which is

being imparted to girls, especially in the advanced schools, is proceeding on wrong lines and is not calculated to produce the intellectual and physical improvement for which there is need.

64. The special colleges for chiefs continue to flourish. It is characteristic of the times that there is now a general desire to see the courses at these institutions carried on to a more advanced standard. After the close of the quinquennium, a conference was held to consider a scheme for a higher college. *Education of chiefs, etc.*

In Sind there has been a movement for the establishment of special *madrassas* and hostels for the education of the sons of *zamindars.*

65. Liberal grants have been made for the education of Europeans and the domiciled community. An important conference on this subject was held in Simla in 1912. The conclusions of this body, and the funds now being collected in England, are expected to result in a substantial advance. *Education of Europeans.*

66. The number of Muhammadans at school has increased by 32·3 per cent., but is still incommensurate in higher and collegiate institutions. In primary education the community holds its own, and Muhammadan girls now go more readily to school. Awakening interest is evinced in the opening of certain special Muhammadan institutions—such as the Islamia colleges at Lahore and Peshawar and a few high schools—and the proposal for a university at Aligarh. *Education of Muhammadans.*

67. The precise increase of education among backward classes is difficult to estimate. In Madras literacy among the *Paraiyans* has trebled. In Bombay an almost general spread of education has taken place in these classes, amounting to an increase among those under instruction of 72 per cent. for aboriginals and of 64 per cent. for depressed classes. Vast numbers of these tribes and castes, however, are still untouched by education. Special inspecting agencies are required, and the provision of trained teachers from the tribes themselves. Much may be hoped from the general spread of schools. *Education among depressed classes.*

68. No account of the educational events of this quinquennium would be complete without mention of the first visit of a British Sovereign to India and of the Delhi Durbar. The Government of India struck over two millions of medallions for presentation to school children, and these were eagerly purchased for distribution by local bodies and private managers. The announcement of a recurring grant for truly popular education was one of the principal boons announced at the Durbar. Arrangements were made for the attendance at that ceremony of large numbers of pupils, who, clad school by school in different coloured head-dresses, gave to the vast auditorium the appearance of a variegated tulip-bed. His Imperial Majesty's reply to the address from the Calcutta University and the Queen-Empress' visit to the Mayo College emphasised their interest in the educational welfare of the country. The memory of the Durbar will be perpetuated in schools by the celebration of its anniversary. *The royal visit to India.*

As to local celebrations of the occasion, an account is given by Mr. de la Fosse, from which the following passage is taken :—

"The local celebrations excited the liveliest enthusiasm, and the occasion was specially brought home to the minds of school boys and school girls by the grant of a holiday and the presentation of coronation medallions amid suitable festivities. The expense was borne partly by government and partly by local boards, in some instances relieved by private voluntary contributions. The labour of distributing Durbar medals—in all over five lakhs—was ungrudgingly undertaken by my office. The medals were much appreciated by the children and will remain a symbol of the gracious good will and favour of the Crown to its most distant and youngest subjects. Little bands of school boys from different districts had the privilege of attending the Imperial Durbar, and the detachments showed up well in their neat costumes and various coloured *safas.*"

A special Muhammadan deputy inspector of Bombay remarks on the deep impression of love and loyalty evoked by the celebrations in Urdu schools. The boarders of one of the schools for depressed classes in the same

presidency were taken to Bombay on the occasion of Their Imperial Majesties' arrival at the expense of a private individual. And throughout the whole country the royal visit was celebrated in schools with the utmost enthusiasm.

His Imperial Majesty while in India gave emphatic and practical assurance of his interest in the educational welfare of his subjects. The grants announced at the Royal Durbar have been followed by other liberal allocations.

CHAPTER IV.

CONTROLLING AGENCIES.

I.—General.

69. The control of education in India is somewhat complicated. There is a department of education in the Government of India, and there are departments of public instruction in the provinces. These are charged with the work of education. It must not, however, be supposed that their administrative powers are unlimited, still less that they are the main agency for imparting instruction. Each department is subject to the government, and its operations are co-ordinated with the general policy of government. Subject to this general condition, each department under a Local Government advises as to educational needs, administers the funds allotted, inspects, examines, disburses grants-in-aid, frames rules and enforces them, prescribes curricula and maintains a few educational institutions. But its controlling powers are shared, in the matter of higher education, by the university, and, mainly in the matter of elementary education, by the civil authorities and the local and municipal boards. The great majority of institutions are maintained by the boards or by private agencies. The latter may receive aid either from the department or from the board. This chapter contains a brief description of these authorities. *General control.*

70. The formation during the quinquennium of a department of education in the Government of India was a signal recognition of the importance which this branch of public business is beginning to assume. The new department was created in 1910 and got to work in the beginning of 1911. Education had previously competed for the attention of the Home Department along with a host of other subjects. The department of education also, besides its main business, deals with sanitation, local self-government, ecclesiastical matters, archæology and museums. The post of Director General of Education in India has been abolished, or rather absorbed into the new department, which comprises, besides the Member of Council, two secretaries and an assistant secretary. *Department of Education in the Government of India.*

71. Each province has a department of public instruction, save the small province of Coorg, where inspection, etc., is managed from Madras. In January 1911 a department was formed in the North-West Frontier Province, where previously the cares of archæology and education were combined in the same office; and the inspecting agency, etc., had been included in the Punjab service. A director has now been appointed for the North-West Frontier Province and Baluchistan; and, at the conclusion of the quinquennium, proposals had been submitted for a separate cadre of officers. *Provincial department of public instruction.*

A provincial department consists of a director of public instruction, a certain number of inspectors with their staff, professors of colleges and teachers in schools. The director administers the department. The question was discussed during the quinquennium whether he should be given the status of a secretary to government (in the Punjab he already is an under secretary), and was decided in the negative mainly because it was deemed advisable to leave him unfettered in his capacity of an administrative and inspecting officer supervising the work of the department and moving about among educational institutions. The inspectors, professors and teachers are grouped in various services. The teachers are mainly employed in the higher institutions, and, even here, represent but a small part of the total number, the majority being in private employ, while nearly all the teachers of primary schools are board or municipal servants or work in aided institutions.

II.—The services.

72. The services in which these officers are placed are the Indian educational service, the provincial educational service, the subordinate and the *Growth of the services.*

lower subordinate service. Some hold posts outside any service. The existence of the two higher services in their present form dated from 1896. Up till that time, Europeans and a few Indians were classed together in a graded service (with increments of pay in each grade) rising from Rs. 500 to Rs. 1,500. Originally they all drew pay at the same rates according to their grade. During the time of Lord Ripon, the pay of Indians was reduced to two-thirds of that of Europeans in the same grade. The Public Services Commission of 1886-87 resulted in the formation of provincial services. The reorganisation was not carried out till 1896, and virtually resulted in the separation of Europeans and Indians. The former are generally placed in the Indian educational service, the qualification for which is recruitment in England by the Secretary of State—a mode of appointment open to Indians but applied to them only three times since the reorganisation. The latter are placed in the provincial service; and here the separation is not so complete, for this service contains a certain number of Europeans recruited in India. This distinction has given rise to comment. The improvement of the terms of both the Indian and provincial educational services (including the desirability of making promotions from the latter to the former) has for some time been under consideration by the Government of India and Local Governments, but (save for the introduction of some temporary though by no means unsubstantial measures of alleviation) has been held in abeyance pending the deliberations of the Royal Commission on the Public Services in India now sitting. The principle of this division of services rests on the method of recruitment. "The provincial service was intended to represent side by side with the Indian educational service the highest class of employment open to natives of India. Both of these branches, that recruited in England and that recruited in India, together form the superior service of the education department, the difference between them being not in status or duties, but in the conditions of employment as regards pay, leave and service for pension."

Formation of the services.

73. The conditions of the Indian educational service are similar throughout India. Those of the locally recruited services vary from province to province. The following may be taken as a general description, allowance being made (save in the Indian educational service) for provincial variations :—

(*i*) The Indian educational service is recruited by the Secretary of State in England and is composed almost entirely of Europeans. Its members fill the posts of inspectors, principals, professors and headmasters. Picked officers are made directors. The pay is Rs. 500 a month, rising after ten years to Rs. 1,000. There are also sixteen allowances of two grades (excluding four allowances for Chiefs' Colleges); the higher grade of allowance rises to Rs. 500 a month. Consolation allowances of Rs. 100 may be given after fifteen years' service if the salary of any officer has not, within that period, exceeded Rs. 1,000 a month. Exchange compensation is also given. The average emolument for officers on these terms is (on an actuarial calculation) Rs. 974. Directors are on special pay, the highest maximum being Rs. 2,500 a month. Full pension is ordinarily earned after 30 years' service and amounts to £437-10-0 a year. A director of approved service receives £525 a year The terms for ladies are special; their pay is generally from about Rs. 300 to about Rs. 500 or Rs. 600 a month. Their pension is calculated according to pay.

(*ii*) The provincial service is recruited by the Local Governments and is composed mainly of Indians. It comprises inspectors, assistant and joint inspectors, principals, professors, headmasters of collegiate high schools, headmasters of some normal schools, etc. The arrangement of the services varies. In several provinces there is regular grading from Rs. 200 to Rs. 700 a month. The average pay is between Rs. 300 and Rs. 400, save in the Central Provinces where it is Rs. 273, and in Burma where it is Rs. 404 a month. Here also the service qualifying for full pension is 30 years. The maximum pension is Rs. 350 a month. It is calculated as usual on three years' average emoluments.

(*iii*) The subordinate service is similarly recruited by Local Governments and is composed almost wholly of Indians, filling the posts of deputy and

sub-inspector, lecturer, headmaster, assistant teacher, etc. The formation varies greatly. In some provinces there are eight grades, ranging from Rs. 50 to Rs. 250 a month. (In the Punjab the service contains two posts on Rs. 400 a month.) These services contain very large numbers of officers.

(*iv*) The lower subordinate service exists only in certain provinces and contains officers of lower qualifications, generally on less than Rs. 50 a month. The average monthly pay in the subordinate and lower subordinate services taken together is Rs. 55 a month.

(*v*) Outside posts are generally created for officers performing special duties.

Numbers in the services.

74. At the close of the quinquennium there are ten directors of public instruction. There are also (excluding the fourteen posts in Chiefs' Colleges) 175 officers in the Indian educational service, the average monthly pay being about Rs. 783 (less than the actuarial by reason of the fact that many officers have not reached the Rs. 1,000 grade). Of these, four are Indians. There are 380 officers in the provincial service (of whom 328 are Indians and some of the others members of the domiciled community); the average pay is Rs. 318 a month. The subordinate and lower subordinate services contain 7,811 officers (of whom 200 were Europeans or members of the domiciled community) drawing an average pay of Rs. 55 a month. There are also 465 ungraded posts (of which 43 are held by Europeans or members of the domiciled community) on an average pay of somewhat over Rs. 75 a month; and 104 posts which cannot be classified (of which 90 are held by Indians) on an average pay of slightly over Rs. 152 a month. The total number of officers in these services is thus 8,945.

Improvement of conditions.

75. The conditions of service in the education departments have been under discussion during the quinquennium. Among the questions that have come forward are the scale of pay and the number of years qualifying for pension in the Indian educational service, the slowness of promotion and the impossibility of advancement beyond the highest grade in the provincial service. The solution of these problems, as stated above, has had to be postponed, temporary measures of relief being devised for the provincial service. In some provinces, too, improvement has been found essential in the subordinate services.

Generally speaking the scale of pay is low; and the grading, inferior to that worked out by Sir David Barbour, affords tardy promotion. In 1906, the Government of India suggested in connection with the reform of secondary education a minimum salary for teachers of English of Rs. 40 rising to Rs. 400 in the case of headmasters of high schools. The Local Governments have presented schemes of improvement. The following have been under consideration or sanctioned during the quinquennium. The Government of Madras have proposed to raise the pay of assistant masters; but the scheme has not yet been sanctioned. In Bombay the pay of headmasters has been revised at a cost of Rs. 16,560 a year; at the close of the period, a scheme for raising the pay of assistant teachers was recommended, at an annual cost of Rs. 31,140, and sanction has since been accorded. In Bengal the terms of the lower subordinate service have failed to give satisfaction. The committee which met in Calcutta in 1908 to consider secondary education made recommendations for the amelioration of the lower services in that province and in Eastern Bengal and Assam and improvements are understood to be under consideration. The provincial and subordinate services in Eastern Bengal were, during the period, separated from those in Bengal and combined with the Assam officers, with beneficial results to those included in them. But the lower subordinate service of Eastern Bengal was deemed so unsatisfactory that it was decided not to include in it the corresponding officers in Assam. The rates of pay for high school teachers in the United Provinces have been raised; the additional cost of Rs. 1,10,358 a year includes the expense of increasing the staff as well as the pay. The prospects of the subordinate service in the Punjab have been improved at a cost which will eventually rise to Rs. 91,820 a year. A scheme has been drawn up for Burma and is under consideration. The administration of the Central Provinces presented an exhaustive scheme for the complete reorganisation of the upper subordinate

service at an annual cost of Rs. 36,012 and the formation of a lower subordinate service at an annual cost of Rs. 2,95,200; sanction has since been given as funds may permit. Changes and additions have also been sanctioned in the service in the North-West Frontier Province which will cost Rs. 16,636 a year.

Teachers not in government employ.

76. These services, however, form but a small section of the host of teachers, who number 215,518. Of these only 7,598 are in government service; 51,979 are in the employ of boards, 9,121 in that of municipal bodies and 146,820 belong to privately managed schools. The conditions upon which the last three classes work are less favourable than in the case of government servants. This will have been gathered as regards secondary teachers from paragraph 21 of the resolution and as regards primary teachers from the fact that part of the present policy is the raising of the minimum pay for those who are trained to Rs. 12 a month. But the principal disqualification is the general (though not universal) want of some provision for old age. Government servants look forward to their pension. In some areas board school teachers also have pensions. But, generally speaking, these and teachers in private employ have no prospect of pension and no contribution fund. This is a matter in which reform is urgently called for.

III.—Inspection.

Grades and kinds of the inspectors.

77. The inspecting agency is, with minor exceptions, included in the government services. Nomenclatures differ in different provinces. But the following rough generalisation (with exceptions, some of which will be noticed in appendix II) holds good throughout India. The director, besides administering the department, inspects colleges and, so far as possible, samples of other kinds of institutions. Inspectors, included in the Indian or provincial services, inspect high schools, training institutions, and samples of other institutions throughout a commissioner's division or a collection of districts. They are aided by assistant inspectors (in the provincial service) who are, in some provinces, specially charged with the supervision of middle schools. Deputy inspectors, who are generally found in the higher grades of the subordinate service, inspect middle and primary schools and the smaller training institutions throughout a district, or sometimes when the district is large, throughout a part of it. They are in close relation with the district magistrate (and to some extent subject to his orders) and with the district board. They are assisted by sub-inspectors, who are included in the subordinate service. In some provinces yet other inspecting agents are found—supervisors, inspecting *pandits* or sub-assistant inspectors. Thus a hierarchy of inspecting authorities is built up, mainly under the orders of the departments of public instruction, partly under that of the civil authorities.

78. In addition to the ordinary inspecting staff for boys' schools, there are now in most provinces inspectresses and female assistants for girls' schools, and also inspectors for European schools. The existence of such agencies is necessary to the welfare of the particular kind of institution concerned, and is much appreciated. There has been a tendency towards the establishment of inspecting posts for the supervision of technical and industrial schools or even towards the creation of separate departments of industry charged with the supervision of all or some of these institutions. In some provinces a special staff for the inspection of Muhammadan schools has been found necessary; and Bengal possesses special inspecting facilities for areas inhabited by aboriginals and hill tribes. It will be convenient to mention these inspectors in greater detail in the chapters dealing with the subjects concerned. But special inspectors for particular subjects in ordinary schools fall into a different category; and something will be said of them presently.

Cost of inspecting agency.

79. The total cost (excluding direction) of the inspecting agency is Rs. 40,85,834, being 5·2 per cent. of the total expenditure on education, and 7·6 per cent. of the direct cost. The percentage of their cost to the total cost in the various provinces is, in Madras 5·4, in Bombay 3·9, in Bengal 5·1, in the United Provinces 4·9, in the Punjab 4·2, in Burma 7·6, in Eastern Bengal and Assam 6·5, in the Central Provinces 6·4, in Coorg 4·8, in the North-West Frontier Province 2·9. The cost of inspection in any province obviously

depends not merely on the size and pay of the agency employed, but also upon the number of the schools and their efficiency as judged from the point of view of expenditure upon them. Where the average direct expenditure upon each institution is low, the proportion debitable to inspection must be relatively high. On the other hand, where schools are numerous, the cost of inspection per institution naturally falls. Conclusions drawn from the percentages just shown must be modified in the light of this consideration. A calculation has been made showing the cost per school of inspection and direction in each province from a comparison of which with the percentages three different cases arise. In the North-West Frontier Province, where, owing to the liberal scale on which schools are financed, the percentage of cost of inspection to educational expenditure is lowest, the cost of inspection and direction per institution is, by reason of the paucity of schools, far higher than in any other province, and actually amounts to two-fifths of the total average cost of an institution in Bengal. To a lesser extent, the same is the case in the Punjab, where the percentage is moderate, the cost per institution very high. A middle position is occupied by Burma and the Central Provinces, where both percentage and average cost are high by reason of the facts that schools are comparatively few and their scale of maintenance satisfactory. The opposite is the case in provinces which are thickly schooled, like Madras, Bengal and Eastern Bengal and Assam. In all these cases the percentage of the cost of inspection is high. But the cost per school (especially in the two Bengals) is lower than elsewhere. It may be noticed as a significant fact that the cost of direction and inspection per institution in the North-West Frontier Province is exactly six times what it is in Eastern Bengal and Assam.

Changes in organisation and duties.

80. The inspecting agency presents its own problems. A wise treatment of those problems and a well-thought-out organisation of the service reacts favourably upon the schools. The quinquennium has been marked by reform in the system. But in several matters reform is incomplete and questions are still outstanding.

(a) Increase in numbers.

81. In the matter of organisation, there has first been an increase in the inspecting agency. The areas to be covered by the superior staff were obviously excessive. The number of institutions assigned, in some parts of the country, to the subordinate staff, is so great as to render effective inspection impossible. The changing ideas on the duties of inspectors and the recognition of instruction as a part of their work, have placed an additional strain upon the officers. In these circumstances, in the present condition of public opinion, with teachers who are largely untrained, committees that have not everywhere inspired confidence and schools isolated in remote places, the inspecting staff is still in many tracts inadequate, and is far from allowing one officer to every 80 or 100 schools, which is generally regarded as the maximum which he can manage. (As an example, it may be stated that the average number of schools in a sub-inspector's charge in each of the three divisions of Eastern Bengal is 185, 138 and 158 respectively.) On the other hand, increase of the lower staff is unavailing unless there are sufficient superior officers to supervise its operations.

(b) Transfer of staff to government employ.

82. Secondly, the broader duties assigned demand that a superior type of officer be attached to the service. In some provinces, the subordinate inspecting staff had not the status and privileges of government servants. The period under review has seen the transfer of sub-inspectors in Bengal and Eastern Bengal and Assam and of supervisors of elementary schools in Madras; also the re-transfer to the department of deputy and sub-inspectors in the United Provinces. Previously these officers were the servants of local bodies. On the other hand, the inferior agencies in Burma and in Eastern Bengal and Assam are being abolished and replaced by better qualified and better paid officers.

(c) Co-ordination.

83. Thirdly, efforts have been made to ensure better co-ordination. In the majority of provinces (exceptions are Madras, where there are no commissioners' divisions, and Burma, where the circles are still of excessive size) the inspector's circle now corresponds with a revenue division. Thus the commissioner has at hand an educational adviser. A broader view (already

in full existence in some provinces) is also taken of the duties of the inspector. His supervision is generally no longer confined to any special classes of schools. (In Eastern Bengal and Assam the inspector is specially responsible for high schools and training institutions, but is also required to visit a certain percentage of the middle, model girls' and primary schools of his circle.) He is the administrator throughout his circle; and measures of decentralisation have imposed upon him a heavier responsibility. This, however, involves assistance for the inspector. Hence in several provinces an assistant inspector is attached to him; and this practice is growing. In Bengal and Eastern Bengal some divisions require several inspectors. Thus fresh problems arise connected with the distribution of duties. These are solving themselves in different ways in different provinces. In Eastern Bengal the divisional inspector is in general charge of education throughout the division and of all large schemes, while the other inspectors have charge of certain areas under him. In Bengal a somewhat similar arrangement is being tried as an experimental measure. Still more difficult is the problem of those districts where the number of schools requires a strong staff and where the work of education is complicated. There the presence of an officer is needed who is qualified to advise the magistrate and the board, and to supervise his subordinates. It is in provinces like the Bengals that this difficulty is felt. And the point is forcibly brought out in the Bengal report. "The importance," writes Mr. Maclean, inspector in Orissa, "of these officers (deputy inspectors) has not been recognised. They are heads of the primary and middle school systems of the different districts, and manifold duties devolve on them; that of inspecting schools and the work of their subordinates; that of administration and correspondence; that of representing the department on the district boards, which is not one of the least responsible of their duties and will become more important as education develops. To perform these duties efficiently officials of the standing of the provincial service are required." Experience, says Mr. Prothero, shows that where additional deputy inspectors have been added to help deputy inspectors, they should not have been made co-ordinate with the latter. The deputy inspector has become only *primus inter pares*, his power is impaired, and responsibility, shared between different colleagues, is whittled away. It was to remedy this defect that the committee which, in 1908, considered secondary education in Bengal and Eastern Bengal and Assam, proposed a grade of officer to be called district inspector in the provincial educational service. In the meantime the general administration, as well as the inspection of the *sadar* sub-division, has been entrusted in Eastern Bengal to a district deputy inspector. The other sub-divisions are distributed to deputy inspectors, who are subordinate to the district deputy inspector and in whose charges he is required to tour for a certain number of days in the year. The United Provinces report also speaks of the growing importance of the deputy inspector as responsible to the chairman of the district board for the organisation and administration of vernacular education and as adviser to the board.

(d) Method of inspection.

84. A fourth point, to which allusion has already been made, is the growing change in the method of inspection. "Examination," says Mr. Wright, "in secondary schools has given place to sensible inspection. In primary schools examination still retains pride of place. The time has not yet come when it can be wholly replaced by inspection and the transition must be gradually effected according to the growth of technical knowledge, and a sense of responsibility on the part of the masters." Moreover, inspection is now supplemented by advice and instruction.

(e) Specialisation.

85. This broader view, however, besides demanding a well qualified and intelligent officer in the lower ranks, opens up yet another question in regard to schools of higher grade. On the one hand, the exigencies of co-operation between the civil and the educational officers, the necessity for a wide administrative outlook and the dangers of departmentalism point to the territorial unit as the only possible unit of inspection. On the other hand, the more exacting duties of the inspector, the raising of standards and the appearance of new subjects of instruction conspire to make some kind of specialisation essential. The problem demands careful handling and has received it along three lines. First, there already existed special agencies for distinctly

separate kinds of schools. These have now been extended. They embrace, as noticed above, girls' schools and schools for Europeans. The quinquennium has witnessed increase not only in the numbers, but also in the independence and responsibility of the inspectresses and their assistants. Secondly, schools which are a part of the general system but of a special type, have in some provinces been placed under special agencies. Thus, Madras, Bengal and the United Provinces have received during the period separate inspectors for technical and industrial schools. Madras and Burma have arranged for the supervision of normal schools by inspectors who also control European schools. (This is just a case where such special agencies are apt to run counter to the ordinary agency; and the system in Madras has undergone modification accordingly.) Arrangements have been made in certain areas for Muhammadan and aboriginal schools. These will be described in due course. Thirdly, a need has arisen for inspectors of special subjects in the ordinary schools. In the United Provinces, a beginning was made with specialist inspectors in 1911. There are now four such inspectors in the provincial service, one for Sanskrit, one for Arabic and Persian, one for science and one for drawing and manual training. Where possible, they make joint inspections with the divisional inspector. But, as this is difficult to arrange, they spend most of their time in visiting schools alone, sending reports to the director and to the inspector, the latter of whom takes necessary action on them. "By this means," says Mr. de la Fosse, "aspects of school work, which did not always receive adequate attention, are now better looked into; approved methods of teaching are advocated, teachers stimulated and encouraged, and good work discriminated from bad. Improvements are certainly being effected by the efforts of these officers; but the most important work they have done is to bring to light the real state of tuition in these subjects of instruction. While this was imperfectly known, attempts at improvement were liable to be rather like groping in the dark." In the Central Provinces a similar proposal has been made. The Government of the Punjab has proposed an inspector of drawing and manual training; and that of Madras wishes to create two instructors in the latter subject.

86. Finally, the quinquennium has seen the beginning of a demand for medical inspection—a matter in which India has hitherto been peculiarly backward. In the Bombay report the following remarks occur:—"With a few honourable exceptions in no school is there a systematic medical inspection of pupils. In England it has been recognised as being of vital importance and must eventually receive attention in India. A moment's reflection will show what immense good can be done by the detection and prevention of vicious tendencies, by care of the eyes and by precautions against fevers, and there are many other opportunities for useful action." In the Punjab, too, attention has recently been directed to the prevalence of physical defects among school pupils. "Evidence collected in 1911 by Mr. Western, of the Cambridge Mission, and by Dr. Girdhari Lal Batra, pointed to conditions of health which, though largely traceable to faulty home upbringing, might be within the power of school authorities to improve. The question was discussed at length in the last educational conference, which recommended the appointment of a school medical officer to visit all the board schools for the province to organise and co-ordinate enquiries. Meanwhile sporadic attempts have been made to collect information which may bring home to parents and others the need of taking reasonable precautions against ill-health and of arresting in good time tendencies which, if overlooked, may have serious future consequences. The Gurdaspur district board has appointed a medical officer to visit all the board schools and advise and report on the health of the pupils. The Health Officer at Amritsar has instituted a medical examination of school pupils in the town. A large number of pupils in the Lahore schools have been medically tested. Weight and measurements are regularly taken and recorded in many institutions. Definite results can hardly be looked for as yet, but the fact that public opinion is being aroused on this matter is a good augury for the future." Two interesting notes on the subject accompany the director's report. The matter is one on which the recent resolution of the Government of India is emphatic, and it is to be hoped that, combined with instruction in educational hygiene, this branch will shortly see a distinct development.

(f) *Medical inspection.*

Details of provincial inspecting agencies.

87. Those who desire to pursue into detail the changes which have been made in different provinces during the quinquennium and the organisation and members of the provincial staffs, are referred to appendix II, to which is also attached a table showing the numbers of inspecting officers of various kinds in the provinces.

IV.—Other agencies.

(i) Civil officers.

88. The civil authorities, as in general charge of all branches of administration in their jurisdictions, are concerned with education. More especially is the collector (or deputy commissioner) brought into contact with primary education through his relation with the board. The following description is taken from the Burma report:—"The commissioner or deputy commissioner respectively is responsible for the state of education in his division or district. His responsibility is exercised through the educational officers concerned and (except in municipal schools) is of a general nature, questions of appointment, curricula, forms and other technical matters being left to the education department. District and divisional officers are consulted in particular by the department in regard to the expansion of education, primary or secondary, the choice of schools and localities suitable for schools, the appointment of school committees and so forth. The educational sections of municipal and district cess fund budgets are supervised by these authorities, who, under government, determine the particular sums to be devoted annually from local funds to education in the areas concerned." Systems vary in different provinces. Where administrative problems are complicated and the work highly exacting, the civil officer has less time to give to educational problems, opportunities for mutual discussion are rarer, and action, not fully preconcerted, may eventuate in differences of opinion. On the whole, however (even where, as is frequently the case, the deputy inspector is partly the servant of the inspector, partly that of the magistrate), the participation of the executive and the educational officer in educational work is beneficial as well as necessary. Mr. Wright remarks that the dangers attendant on the system are obvious in theory. "In practice," he adds, "it works admirably. I know of no case of friction between a revenue officer and an officer of the department. A united desire to advance education is potent to disperse petty differences of opinion, and the influence on and direct stimulus to education that a deputy commissioner can bring to bear is very great. Both to deputy commissioners and to commissioners the department owes a debt for steady support and assistance in all branches of work. The advance of recent years could not have been effected without their co-operation." Sub-divisional officers, tahsildars and naib tahsildars frequently give valuable assistance in inspecting schools.

(ii) Local bodies.

89. The bulk of elementary education is in the hands of municipal and district boards. Not only do they maintain schools; they also disburse grants to schools maintained by private bodies or persons. This responsibility is imposed on them by law and their power defined and limited by rules framed under the Acts.

The question of finance is of vital importance, but will be treated of in the chapter on primary education. Here it will suffice to say that some percentage of the income of a board, or the income derived from certain sources, or a sum fixed from time to time is to be expended on elementary education, that the officers of the departments generally scrutinise the educational portion of the board budgets, and that boards are not supposed to spend money on secondary education until the claims of primary education have been satisfied. As a matter of fact, municipal and district boards at present support 12 colleges, 1,220 secondary schools and 27,864 primary schools; and these figures exclude the schools which are aided from local funds. As regards control, the duties of the boards generally comprise the establishment, maintenance and closure of their own schools, the appointment and dismissal of staff and the disbursal of aid to privately managed schools. In the discharge of these functions they are guided by rules issued by the Local Governments under the Acts. Generally speaking, the closure of a school requires sanction by the department, or at least sufficient notice to permit of an appeal to the inspector. The curriculum is that prescribed by government. The scale of grant to aided institutions must generally be in accordance with the departmental

rules. Adherence to these rules is secured by inspection. In Bengal, the United Provinces and Eastern Bengal and Assam part of the inspecting staff was, at the beginning of the period under review, in the service of the boards. As stated above, this has now been almost entirely changed. Furthermore, the deputy inspector is generally a member of the district board and is able to give advice and bring irregularities to notice. (Mr. Prothero notes that the deputy inspector of Murshidabad was excluded from the board in 1911-12, and comments on this fact.)

Their powers.

90. The rules differ in different provinces. In Madras the administrative powers vested in the local and taluk boards are extensive, those permitted to municipal boards are less so. In Bombay the municipal board has considerable freedom, while the administration of the local board schools is really carried on by the department, which appoints and dismisses teachers, fixes their pay, etc. In Bengal the system of board schools is practically unknown and has only recently been initiated in Eastern Bengal, though it is prevalent in Assam; but the boards in the Bengals exercise considerable influence through the distribution of grants-in-aid. In the United Provinces and the Punjab there are many board schools and the boards have effective powers devolved upon them. In Burma there are no district boards; but municipal boards manage schools; and in Lower Burma a number of district cess schools have been opened under the joint management of the deputy commissioner and the department. In the Central Provinces the powers of the district councils (as they are there called) are similar to those held by the same bodies in other provinces, save that they are ordinarily required to employ certificated teachers and that the department exercises certain powers of punishment, dismissal and transfer. In the North-West Frontier Province also district and municipal boards manage schools. It should be explained that the district board or council exercises jurisdiction (as its name implies) over a district. In Assam the powers described above are vested in local boards, whose jurisdiction is conterminous with a sub-division of a district. In other provinces, the local or taluk boards are generally to a certain extent subordinated to the district board and exercise, in the matter of education, powers devolved on them by the latter.

Their value.

91. A natural comment on board administration (which however should not necessarily apply to municipal boards) is that the members often have little or no knowledge of the villages where the schools are situated or the conditions and work of the schools themselves. Mr. de la Fosse, while dwelling on the value of inspection and the ounce of personal knowledge which is worth tons of written reports to the school administrator, and while admitting the display of increased energy on the part of members, states that this is due mainly to the credit of those who are officials. "Non-officials in some districts have shown commendable activity in this matter, but on the whole they interpret their duty with considerable latitude, and in some places do practically nothing at all. It is said that this apathy is especially characteristic of members who live in villages and who could do so much to help on education. The inspector of Agra has calculated that if the elected members had carried out the minimum duties required by the rules, their inspections would have numbered 2,126 instead of 614 in his division."

(iii) Private agencies.

92. Private agencies are a factor of great importance in the educational system. They may be placed in three classes—European or American missions, Indian societies or committees, and individual managers who are generally themselves also the teachers in the schools.

Missions.

93. The history of early mission effort has already been briefly indicated in this volume and is treated at greater length in Mr. Nathan's review for 1898-1902. "Missionary societies of all denominations," said Mr. Nathan, "have contributed to the work, and at the present day missions connected with the Church of England, with the Roman Catholic Church, with the Church of Scotland, with the Free Church, with the Wesleyan, with the Lutherans, with the Baptists and with other sects, have their schools for the instruction of Indian youth." Mission societies maintain colleges and secondary schools. Their work in establishing well-supervised hostels is particularly appreciated. They also maintain primary schools among special sections of the population—hill-tribes or backward classes. In the Khasi hills of Assam a Welsh

mission manages the great majority of the primary schools, receiving a lump grant from government. In the Punjab and elsewhere the Salvation Army is working among the depressed classes. And the Oxford Mission and other bodies are doing admirable work among the Namasudras. " The part played by mission agencies in Bengal," writes Mr. Prothero, " is increasing in efficiency and importance, especially in female education and in educational work among aboriginal races." Their work among low-caste children in the Central Provinces is commended. Further, a considerable number of European schools are under mission management. The work of these bodies constitutes an element of strength in the educational system of the country. They furnish a body of men, well-educated, imbued with fresh ideas from Europe or America, endowed with the missionary spirit, self-sacrificing, reliable. The early fears of proselytisation have vanished, and there are few parents whom religious scruples would deter from sending their children to a mission school. It would be difficult to imagine an agency more helpful to government, more trusted by the community and more wholesome in its educational influence.

Other societies.

94. Societies may be roughly classed as those which spread their influence over large areas and those that confine their operations to a single institution. To the former class belong the denominational bodies which have become a factor in the Punjab—the Arya Samaj, and the Chief Khalsa Diwan, etc. These support secondary and primary schools. To the latter belong local committees which generally devote themselves to maintaining a college or a high school. These institutions were often indistinguishable from schools run by the staff or others, as a commercial speculation for private profit. The Bengal report ventures the assertion that this is now largely a thing of the past.

Proprietary schools.

95. Thirdly come the schools which are confessedly maintained by one or more members of the staff as a means of livelihood. Some secondary (probably a good many middle) schools still exist of this kind, with or without a *fainéant* committee. But the system chiefly obtains among small elementary schools. A teacher will set up in a village. He gathers together a few children into what is known as a ' venture ' school. Sometimes the teacher proves inefficient, or the people are callous, and for this or some other reason the school perishes. If it continues, the deputy inspector takes notice of it and brings it to the attention of the board. The teacher then receives a small grant and subsists on this, the fees and such presents as he receives from the villagers. Thousands of elementary schools in the Bengals are of this type.

Growth of privately managed institutions.

96. The institutions under private management comprise 120 colleges with 23,216 students, 4,594 secondary schools with 641,288 pupils, 91,476 primary schools with 3,070,823 pupils. These, together with other schools of various kinds, aggregate 101,705 institutions with 3,888,670 pupils. The numerical importance of these agencies may be gathered from Mr. Prothero's report—" Of the total number of educational institutions in Bengal which conform to recognised standards, 97·7 per cent. are under private management."

Financing of privately managed institutions.

97. All these institutions, whatever the nature of their management, are eligible for grant provided they fill a need and serve a useful purpose. They are generally supported partly from public funds, partly from fees and subscriptions. The amounts contributed from these sources over a series of years are shown below :—

Year.	Grant from public funds.	Fees.	Subscriptions, endowments and other sources.	Total.
	Rs.	Rs.	Rs.	Rs.
1886-87	34,05,336	43,76,173	36,87,930	1,14,70,664
1891-92	36,16,788	59,06,225	43,91,236	1,39,14,249
1896-97	41,34,001	68,25,274	56,19,267	1,65,78,542
1901-02	45,84,373	76,54,713	67,56,551	1,89,95,637
1906-07	79,95,071	88,66,597	77,03,272	2,45,64,940
1911-12	97,94,271	1,31,85,141	1,08,43,457	3,38,22,869

It is interesting to notice that the funds from each source have grown almost *pari passu*, and that in each case they have approximately trebled since 1887. " The schools," says Sir A. Bourne, speaking of privately managed secondary schools, " are much too apt to depend for their maintenance exclusively on fees and grants. Few of them are endowed in the sense that English educational foundations are so and none are largely endowed. In some cases the endowment fund is of the nature of floating capital liable to be drawn upon at any moment of emergency, however temporary. The absence of endowments makes the schools too dependent on their fee collections and obliges them to have in mind not so much an ideal of education as the demands of the pupils and their parents."

98. Privately managed institutions play a large part in higher education. Some of them are highly satisfactory—some are not. The Lieutenant-Governor of the Punjab sounds a note of warning against the tendency on the part of certain private institutions to sacrifice quality to quantity and to foster sectarian rivalries. " The report," runs the resolution, " shows that buildings are sometimes run up in a hurry, collapsing a little later. Pupils are attracted by various objectionable methods such as the inducement of a slack discipline. One school with accommodation for 250 boys was found to have 800. In another a class room fit for 18 or 20 was made to hold 50 boys." In the field of primary education, the aided system has proved, on the whole, a failure. The institutions thus maintained do not fulfil the conditions laid down in the despatch of 1854, and Mr. de la Fosse complains that the reality rarely possesses any resemblance to the ideal originally conceived. " The elusiveness of the management, the poor qualifications of the teacher, the wretchedness of the school room, the beggarliness or complete absence of equipment, the starvation wages of the teacher need no further illustration, unless the following touch from an inspection report of this year be added :—' In some cases the teachers hold school at their own houses or in the chaupals, or set up a chhappar outside the village by begging for some straw and collecting something from boys to defray the cost of making it.' " In most provinces (the Bengals excepted) a great mass of the elementary schools are under board management; and the feeling in favour of this kind of school appears to be growing. *Their value.*

99. The powers of the universities will be described in the ensuing chapter. As controlling agencies they are of high importance since they not only frame courses and conduct examinations for diplomas and degrees, and affiliate, inspect and disaffiliate colleges, but also prescribe the curricula in the upper classes of high schools which prepare for the matriculation examination and with certain limitations confer and withdraw recognition of those schools. Thus the universities exercise a large amount of influence upon the higher institutions of education, though the management of those institutions is mainly in the hands of private managers and to some extent in those of government. Their relation to the departments of public instruction is twofold. On the one hand, members of the departments are included (*ex-officio* and otherwise) in the governing bodies of the universities. On the other hand, the inspection of schools for purposes of recognition and the continuance of recognition is mainly conducted by the departmental officers, the recommendations of those officers are generally accepted, and the application for recognition ordinarily passes through the official channels or is returned to the department for report. The Madras University is exceptional; there recognition is the act of the department. (*iv*) *The universities.*

100. Among other bodies which control or advise the best known is the educational syndicate in Burma. This came into existence in 1881 and was a few years later incorporated under Act XXI of 1860. Under the rules of the syndicate, it consists of not more than 20 members. " This institution," says Mr. Covernton, " has continued to act throughout the quinquennium as a consultative council on educational questions, its advice being sought by government and the director of public instruction, and as a board of examinations. The only educational examinations undertaken by it are those of teachers and students desirous of obtaining certificates of proficiency in the theory of teaching. These examinations are carried out with the help of the department's personnel and selected heads or teachers of recognised schools. The (*v*) *The educational syndicate in Burma.*

creation of a university for Burma will probably render necessary a revision of the constitution and position of the educational syndicate."

(vi) Committees, etc.

101. Governing bodies and committees are formed for the detailed control of individual institutions. These are of various kinds, according as they are formed for government or non-government schools, for higher or for elementary institutions. The establishment of governing bodies for colleges and managing committees for high schools is laid down in the Calcutta University regulations. In the *mofussil* colleges of Bengal, the governing bodies of government colleges are constituted of the commissioner and the district or sessions judge, the principal and the senior professor. In Calcutta government colleges the constitution varies. These bodies possess limited but independent powers of control. At the Presidency and Sibpur Colleges the scheme is being tried of giving them certain funds for disposal. In Eastern Bengal and Assam the governing bodies of government colleges are ordinarily composed of the divisional commissioner, the principal and the senior professor. The committees of privately managed institutions are variously constituted. There is a tendency to place primary schools under committees. Where the teacher is in effect the proprietor, these are of little avail or non-existent. Where the board school system is implanted, they are more effective, especially in the Central Provinces, where Mr. Wright says that they are usually considered useful. "Commendation is more general from Berar, where the power to use the income from fees, and to settle questions of discipline, and responsibility to a certain extent for the teacher's performance of his duties are highly appreciated and have produced a growing interest on the part of the members."

102. In some provinces there has been an attempt to place the organisation of girls' education or the management of girls' schools under committees largely composed of ladies. Eastern Bengal and Assam has a standing committee for the province, which gives advice to government. In the Central Provinces "a beginning has been made in the formation of school committees composed of European and Indian ladies who take an active interest in the local girls' schools."

103. Visiting committees also exist for certain classes of institutions—generally those of a special kind. In Bengal, a wide application has been attempted of this system. "These committees," says the report, "whose functions are purely advisory, were constituted by government resolution in 1903, and the system has been extended to secondary schools under boards. The inspectors of Patna, Bhagalpur, and Orissa agree that these committees are of little practical use. The report of the inspector of the Presidency division on this point is colourless, and merely gives numerical details of the meetings. The Burdwan divisional report gives no opinion as to the merits of these committees. There is no question that these bodies might do very useful work if they performed the duties assigned to them; the difficulty apparently is to induce them to take an interest in their work." Another experiment in Bengal, which does not appear to have been attended with success, is the formation of district committees of public instruction. Those which were constituted appear to have done nothing, and, writes Mr. Prothero, "under these circumstances it has been decided to abolish these institutions, and only formal orders are awaited on the subject."

(vii) Text-book committees.

104. Text-book committees, though their functions are mainly advisory, exercise a very considerable control over an important branch of educational work. They will receive treatment in chapter XXII.

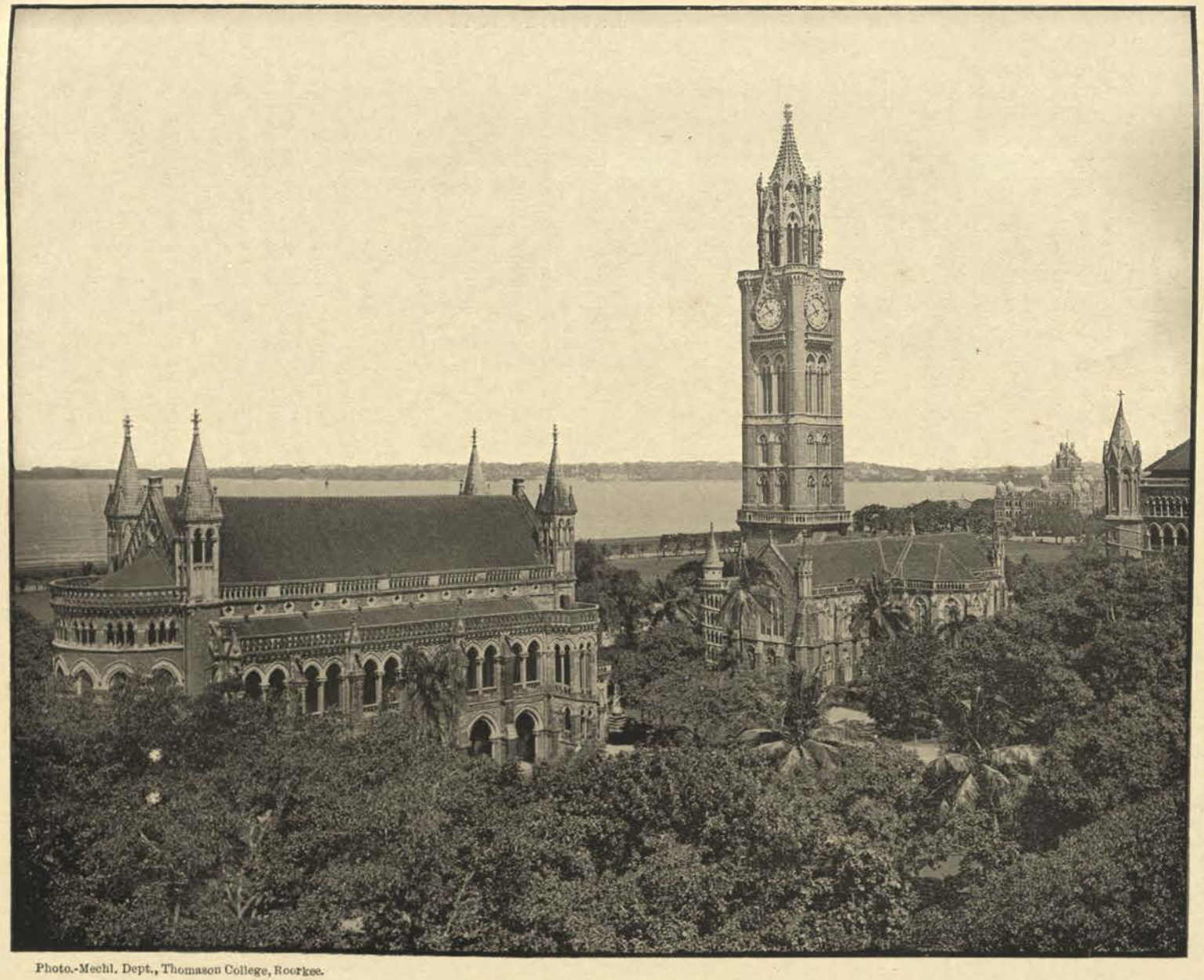


Photo.-Mechl. Dept., Thomason College, Roorkee.

BOMBAY UNIVERSITY.

Photo.-Mechl. Dept., Thomason College, Roorkee.

ALLAHABAD UNIVERSITY.

CHAPTER V.

UNIVERSITIES.

I.—General.

105. The five Indian universities are incorporated bodies owing their constitution and powers to Acts of the legislature. The Calcutta University and those of Bombay and Madras were incorporated in 1857, the Punjab University in 1882, and the University of Allahabad in 1887. Each university is, in the main, the examining body for a number of affiliated colleges, amounting, in the case of Calcutta, to 56. The principal examinations are the matriculation which admits pupils into colleges, and the intermediate and bachelorship examinations which are held ordinarily at the conclusion of the second and the fourth years of a student's career. *Character of the universities.*

106. The Indian Universities Act of 1904 largely added to and partially repealed the previous laws on the subject. The passage of that Bill through the Imperial Legislative Council was a stormy one. Even now, when the gloomy prognostications then expressed have been falsified, it is sometimes asserted that the Act officialised the universities, whereas, as pointed out by Mr. Orange, it increased the proportion of elected Fellows in each senate save that of Allahabad. The Act regularised—it did not officialise. On the contrary, the universities have been stronger and more independent bodies since it was passed. For they found themselves endowed with two new powers—organised control over the constituent colleges (which before had been lacking) and functions of teaching, especially of higher teaching. Furthermore, the government demonstrated its good-will towards them by Lord Curzon's grants in 1904-05 of five lakhs (to be partially utilised for privately managed colleges) and again by assistance in 1912 amounting to sixteen lakhs non-recurring and three lakhs recurring. *The Act of 1904.*

107. The past five years have witnessed a striking development, made possible and suggested by the Act of 1904, along lines which will be described in detail later in this chapter. As regards the governing bodies, that Act reduced the number of Fellows, insisted on a strong educational element, set a limit to the period of office, penalised neglect of duty (where formerly a fellowship was too often regarded as a dignified but sinecure title), and introduced an organised system of election. The elective element has now been more widely introduced—or rather based upon a broader electorate. Interest has been stimulated in the educational activities of the senates. And the independence of those bodies has grown. The influence of the central organisation over its colleges has been strengthened through a more strict and orderly system of affiliation. Inspection by the university has rendered that system effective and has introduced a unifying bond among the colleges. Discrimination has been exercised in the granting of affiliation to colleges in different subjects. As regards the courses, the quinquennium has seen their enrichment by the inclusion of new subjects; Bombay has established a degree in commerce; Madras has framed oriental courses; the creation of a medical faculty at Allahabad has given an impetus to the study of biology. At the same time specialisation is becoming more and more a feature, notably in the faculties of medicine and engineering. There is a tendency to prescribe correlated schools of study—a change which is visible in several of the universities and notably at Bombay. Detailed syllabuses are taking the place of mere prescription of examination subjects. There has been some adoption of the system of tests by compartments. As to university teaching, the movement continues in some provinces of partially concentrating instruction in law at central institutions under the direct management of the universities. At Calcutta a system of post-graduate lectures has been built up at the headquarters of the university for instruction up to the mastership degree, and affiliation to that degree has been *Organisation and courses during the quinquennium.*

allowed (and that in but few subjects) to only two colleges outside the metropolis. Allahabad has added to the facilities for M.A. study by organising courses and instruction in economics and Latin. A still higher grade of teaching with a view to stimulating original research has been fostered by a few appointments of specialising professors. The new responsibilities in this respect which the Act devolved upon universities have thus not been neglected. But want of funds for founding chairs and the uncertainty of any openings commensurate with the time and labour necessitated by higher study and research are still a drag on this form of university activity. The recent grants made by the Government of India and private liberality will help to remove the former obstacle; the latter will gradually vanish with the growth of culture and the demand for specialisation which inevitably arises with the advance of education to higher levels and the development of scientific pursuits. There has been remarkable activity in building; and the universities are now generally possessed of worthy habitations, though much still remains to be done in this direction and in the supply of fully equipped libraries.

Numerical progress during the quinquennium.

108. The statistical advance of the universities during the quinquennium is briefly as follows :—

—	1906-07.*	1911-12.†
Colleges	176	179
Pupils	18,001	36,533
Passes at the B.A. examination	1,668	2,415
Passes at the B.Sc examination	35	280
University expenditure	Rs. 10,38,312	Rs. 14,16,734

The large increase of pupils and passes testifies to the growing demand for higher education. This has been met without sensibly enhancing the number of colleges. But the size and efficiency of the institutions have increased; and it is in connection with them rather than the universities that advance in cost will be shown.

Criticisms on the university system.

109. Such in outline has been the progress of the universities under the stimulus of the reforms of 1904. Those reforms have proved fruitful and have been more than justified. Their limitations were obvious even to those who carried them through. Witnesses before the Commission of 1902 urged the creation of additional universities. This, carried to its logical conclusion —the adoption of a system of self-contained local universities—appeared to involve either a multiplication of centres incompatible with efficiency or a concentration which would have left outlying colleges stranded and would have aroused the strongest opposition. Neither course appeared practical, and (in the words of Mr. Orange) " the principle of the federal university which examines those whom it has not taught received, by the Act of 1904, a new lease of life." But, with the rapidly growing interest now evinced in higher education, it was impossible that an ideal abandoned in England and elsewhere should remain unchallenged in India. The quinquennial report from Bengal strikes this note in pointing out that the present type of university can more easily insist upon a uniform standard of attainments among its students but tends to grow too big for efficient control. " A local university," runs the passage, " is more adaptable to local ideals, and can more easily provide for local requirements. The numbers are more manageable and allow of greater individual attention to the students on the part of the professors. It can more easily fulfil teaching as well as examining functions. It can more easily be made residential, thus ensuring that the students should come under the influence of the university throughout their college life, and

* Figures taken from the reports of Directors of Public Instruction.

† Figures taken from reports furnished by the universities and from the calendars. The term "College," as here used, includes certain schools and classes, and hence the number differs from the total shown in para. 147. The details are explained in the footnotes to page 59.

not only in the lecture room. The local university can appeal more strongly to the benevolence of local men. The peculiar danger it is subject to is the tendency to the lowering of university standards, but this can be guarded against by constant watchfulness on the part of government and public opinion." However much the Indian university may be improved along its present lines, it possesses inherent defects. Effort is dissipated. A concentrated scholastic atmosphere is wanting. A widespread organisation worked from a single centre makes for monotony. Where the university is not an organic whole, it lacks the volume of thought and the resultant originality which strikes out new lines. It tends to become conventional and imitative. And the same spirit is noticeable in its constituent colleges. The President of Magdalen has told us that a university does best work which " finds itself," which develops its own special advantages, which hears and follows its own inspiring call. Furthermore, the affiliated institutions necessarily vary enormously in efficiency and tone (as a consideration of the comparative cost of educating their students sufficiently shows); and their number and variety make inevitable the adaptation of the standard to the weaker members.

110. The same critical spirit which has recently urged an examination of the London University, has applied itself to Indian universities, which were founded on its model. It has taken different forms. First, the Muhammadans and the Hindus have collected funds for institutions of a denominational type. Second, there is a growing desire for federal or affiliating universities of smaller jurisdiction. In Burma the movement for the creation of a local university has revived. " An important question at issue," says the director, " has been the type of university which should be adopted. A draft scheme in which a modification of the prevailing Indian type of federal university was adumbrated met with considerable criticism in the press as well as at a general meeting of educationalists and others convened in February 1910 by the educational syndicate. That meeting however having decided *nem. con.* in favour of a local university, the question of type was further examined by the educational syndicate through special sub-committees. A second draft was then elaborated in which a compromise between the Indian federate and the British unicollegiate types was recommended. The resultant institution was to be a genuine teaching university composed of at least two constituent colleges and with a system of inter-collegiate lectures and provision for hostels, the government college however being treated *par excellence* as the central and chief institution of the university round which the future accretions would gather." The Lieutenant-Governor considers that Burma should eventually have its own university but that there is no immediate urgency. Meanwhile, a similar idea is being mooted at Patna. Mr. Wright reports that there is a general and strong feeling that the time has come when an independent university is required to satisfy the needs of the Central Provinces. " Distance makes adequate representation impossible on the Allahabad Senate. Nor are our needs similar to those of the predominant partner in that body. Above all the necessity imposed upon our colleges and high schools of conforming to the requirements of a foreign university takes out of the hands of the administration the direction and regulation of secondary education." The resolution states that the Chief Commissioner has every sympathy with the demand for a Central Provinces university both from the practical as well as from the sentimental point of view. Thus the idea of establishing new universities of some sort has formulated itself in three of the provinces where at present there is no separate institution of this kind. In Assam and the North-West Frontier Province the number of colleges or local conditions are not yet such as to demand a change. Third, a clear pronouncement on the subject of an altogether novel type of institution was made by the Viceroy at Dacca early in 1912, when he declared the intention of founding there a local teaching and residential university—a scheme which has since been worked out by an influential committee. The two impracticable alternatives alluded to above are not exhaustive. It is possible (and indeed necessary) to maintain the old affiliating universities while reducing their unwieldy jurisdiction by the establishment in different provinces of new universities of a kindred type; and at the same time to found here and there, in promising centres, universities of a kind more congruous with present-day conditions.

Growth of new ideals.

II.—Organisation.

Chancellors and Vice-Chancellors.

111. The Chancellor of the Calcutta University is the Governor General in India. At other universities this position is occupied by the head of the provincial government within whose jurisdiction is situated the headquarters of the university. The head of the government in Bengal is Rector of the Calcutta University—an arrangement whereby he enjoys a special rank in the university of his province and special opportunities of making known his views. The Vice-Chancellor is the executive officer. He is nominated for two years by the Governor General in Council or the Governor in Council in the three older universities, by the Chancellor in the two younger. He holds his office for two years. At the end of the period the Vice-Chancellors were —at Calcutta Sir A. Mukherji, at Bombay Sir N. Chandavarkar, at Madras Sir J. E. P. Wallis, in the Punjab Dr. J. C. R. Ewing, at Allahabad Sir H. G. Richards. All these are High Court Judges save Dr. Ewing, who is head of a mission college.

The senates.

112. The governing body of the university is the senate. The senate is composed of the Chancellor, the Vice-Chancellor, the Rector (at Calcutta) and two classes of Fellows. (*a*) *Ex-officio fellows.*—These number at Calcutta ten, at Bombay six, at Madras six, in the Punjab three (to whom may be added representatives of Chiefs), at Allahabad four. They include the Chief Justice or Chief Judge of the High or Chief Court where the university is situated, the Bishop of the diocese, the civil ordinary members of the Council of the Governor General (at Calcutta), the ordinary members of the Council of the Governor (at Bombay and Madras) and the local director of public instruction (at Calcutta the directors in Burma and Assam and at Allahabad the director in the Central Provinces are also added). This is the constitution of the *ex-officio* fellowships in the schedules to the Act. The personnel can be changed by notification. At Calcutta the director of Eastern Bengal and Assam took the place of the Assam director; and the formation of the new department of education involved a slight change in the schedule. (*b*) *Ordinary fellows.*—The number of these may not be less than fifty, or more than one hundred, in the three older universities; in the two younger universities the minimum is forty and the maximum seventy-five. In the former, ten are elected by registered graduates, and ten by the faculties, while eighty are nominated by the Chancellor. In the universities of the Punjab and Allahabad, as the Act originally stood, ten are elected by the senate or by registered graduates, five are elected by the faculties and sixty are nominated by the Chancellor. The senates contain a large professional element. Not less than two-fifths of those elected by the faculties or nominated by the Chancellor must be engaged in the profession of education. The number of Europeans and Indians generally about balances. During the quinquennium election by the senate in the Punjab was changed to election by the registered graduates; and, by an amendment to the Act (Act XI of 1911), it has been laid down that in the case of the Allahabad University election may be wholly or partially by the senate or by registered graduates. Fellows, whether elected or nominated, hold office for five years.

The senate deals with the more important business of the university and pronounces on the principles which are to guide its policy. The affiliation and disaffiliation of colleges, the regulations and their amendments and the conferment of degrees are considered at its meetings—subject, in the first two cases, to the sanction of the government.

Faculties and boards of studies.

113. Each member of a senate is assigned to one or more faculties. The faculties have power of election to certain vacancies on the senate and on the syndicate; they ordinarily appoint boards of studies and can in some cases add to their number specialists in the subject with which they deal who are not connected with the university. There is a board of studies for each principal branch of knowledge. These boards recommend courses of study and text-books and nominate examiners for the consideration of the syndicates.

The syndicates.

114. Since the senates are large (though less so than before the legislation of 1904) they cannot be utilised as executive bodies. Hence in each university many matters are delegated to the syndicate, which forms the executive of the university and a very important factor in its constitution. The preparation

of subjects of discussion for submission to the senate, the appointment of examiners, the recognition of high schools, and other questions of administration are transacted by the syndicate. But its actions are subject to discussion in the senate. The syndicate consists of not less than 9 and not more than 17 members, and in the case of the Allahabad University not less than 10 and not more than 18 members. Of these the Vice-Chancellor and the local director of public instruction (and at Allahabad the director in the Central Provinces) are *ex-officio* members; the others are elected by the senate, the faculties, or both. Half of those elected must be heads or professors of colleges, while at Allahabad these must be in an actual majority.

115. Such are the controlling bodies of the universities. They are assisted in some cases by special committees framed for discharging certain functions. As an example may be mentioned the students' residence committee at Calcutta. Each university also has a registrar, who, with his office, disposes of business and issues the orders of the senate or the syndicate. Apart from minor domestic matters such as the appointment and control of their own staff, the main duties of the university bodies thus constituted may be classed as three. (*i*) They recognise schools and hold matriculation examinations for the pupils of those schools and for private candidates. (*ii*) They affiliate colleges, inspect them, and conduct the diploma and degree examinations for admission to which the students of those colleges and private students are eligible. (*iii*) They maintain in certain instances their own collegiate institutions and make provision for university teaching in post-graduate and higher studies. In the performance of all these functions they are guided by their own regulations. These regulations were originally framed by the universities who also make changes in them. The original regulations required, and any modification also requires, the approval of the government concerned. Separate sections of this chapter will deal with courses, examinations and degrees and with university teaching. It remains to give here some brief account of the relations of the universities with schools, and the affiliation and inspection of colleges. *Functions of the universities.*

116. The universities are empowered under the Act to regulate the conditions to be complied with by schools desiring recognition for the purpose of presenting candidates for matriculation. This power is not exercised at Madras, where the recognising authorities are the director of public instruction and (outside British territory) the durbars of feudatory states. At the other universities recognition is the act of the syndicates. The University of Allahabad occupies in this respect a kind of intermediate position since the application for recognition is made through the department of public instruction, which also conducts the initial (but not necessarily subsequent) enquiries. In the other universities the school management may make direct application and it rests with the syndicate to accept the report of the government inspector or to make investigation through other competent persons. The arrangement at Madras is that recommended by the Indian Universities Commission of 1902, whose views on the subject, however, were not accepted by the framers of the Act. (*a*) *Recognition of schools.*

117. The universities conduct their own matriculation examinations. These will be described in chapter VII. It may here be stated that there is a movement on the part of the universities to recognise as equivalent to the matriculation, the various forms of school leaving tests which are springing up in India. School final or school leaving certificate examinations and the senior Cambridge local examination are largely accepted by the universities as equivalent to their matriculation examination. The other examinations so recognised are the London matriculation examination by the Calcutta University, the Oxford senior local examination by the Universities of Bombay and the Punjab and the diploma of Chiefs' colleges within their jurisdiction by the universities of Allahabad and the Punjab. (*b*) *Matriculation.*

118. Those who, having matriculated, desire to present themselves for examination by a university and thus obtain a diploma or a degree must have undergone a course of study at an affiliated institution. Exceptions are made, on the recommendation of the syndicate, by special order of the senate, in accordance with the regulations framed by each university. Affiliation is no longer (as was the case before the Act of 1904) granted *en bloc*, but by (*c*) *Affiliation and disaffiliation of colleges.*

faculties or subjects, and also up to different stages in each faculty or subject. It is thus of two kinds—an institution hitherto unaffiliated must seek affiliation *de novo* in a certain number and grade of courses; an institution already affiliated, but desirous of adding other subjects to those which it now offers, or carrying the student in any course up to a higher stage than has hitherto been permitted to it, must show its ability to do so and thus obtain a further measure of affiliation. The procedure in both cases is the same and is laid down in the Act of 1904. The college must apply to the university and satisfy the syndicate that it is under the management of a regularly constituted governing body, that its finances are sound, that its affiliation and its fee-rules will not, by undue competition, injure neighbouring institutions to the detriment of education and discipline, that the buildings are suitable, that there is a library, that reasonable provision is made for the residence on the spot of the principal and some members of the staff, and that the science laboratories and the arrangements for the residence of students conform to the requirements of the regulations. The syndicate then depute an authority to make a local inquiry, after which they report to the senate who, if necessary after further inquiry, record their opinion. The whole of the proceedings are then submitted to the government who grant or refuse the affiliation sought in whole or in part. The procedure for disaffiliation is similar, save that the initiative is taken by a member of the syndicate, who must give notice of a proposal for withdrawal of privileges from the institution concerned and state his reasons for introducing it. These are made known to the college, with a view to affording it the opportunity of submitting a representation. The syndicate consider the proceedings and if necessary order a local inquiry. They then report to the senate. When that body has recorded its opinion, the whole proceedings must be submitted to the government who may if they desire make further inquiry and then pass such orders as they consider necessary.

(d) Inspection of colleges.

119. The law also lays down that the syndicate shall cause colleges to be inspected, but does not specify the intervals after which inspection is necessary or the nature of the agency (save that it must consist of one or more "competent persons" authorised by the syndicate). At Calcutta the regulations prescribe inspection once a year, at Bombay at least once in three years, at Madras from time to time, in the Punjab once a year and at Allahabad at least once in five years. It is obvious that this is a very important function of the universities; for, though returns, notifications of changes of the staff, etc., are forwarded to the syndicate, personal investigation alone can show whether the general standard of efficiency is maintained at the level required for affiliation. For this, and for the inquiries relative to affiliation and disaffiliation, there is need of an inspecting agency. After the framing of the new regulations consequent on the Act of 1904 special steps were taken. The present arrangements for periodic inspection are as follows. The Calcutta University alone maintains a whole-time paid inspector. As he cannot be expected to have a special knowledge of the requirements of each subject taught, and for other reasons, the syndicate usually associate with him one or two local professors when he is visiting a college or a group of colleges. At Bombay a committee was nominated by the syndicate in 1909. Mr. Prior remarks of its work, "Criticism and appreciation of the respective shortcomings and merits of the institutions visited were put forward and welcomed or resented according as they were felt to be deserved or undeserved; many of the defects alluded to have been since remedied." After detailing some of the opinions of the committee, among which figures a serious complaint made regarding a certain college of the amount of time consumed in the rains by cricket competitions, he gives it as his view that this system of inspection is perhaps the best practicable. "It is open however to the objection that the members of the committee without any conscious bias may take too harsh a view of the shortcomings of rival institutions, but deal too tenderly with those of their own, while constructive criticism might be taken to pledge the members of the committee to more than they could undertake themselves." At Madras a representative body was created after the Act of 1904, which by reason of its composition carried great weight. In the Punjab the inspection of each affiliated college has been performed annually by small committees of from two to four members appointed by the syndicate. The committees are

generally composed of members of the syndicate who are either engaged in actual teaching work or are otherwise specially qualified to judge of the special activities of particular colleges. A secretary to these committees also visits all colleges and is thus enabled to present a comparative report. " This method of inspection," says the university report, " is found to work admirably in practice, and as a direct result an all-round improvement in every department of college life and activity is everywhere visible. College authorities welcome the inspection committee as a body of experts able and willing to advise on methods of instruction, on matters of college discipline, and on special problems and difficulties which particular institutions may encounter, while the members of the committees themselves gain experience from the observation of college work in varying circumstances and conditions." At Allahabad a board of ten inspectors was constituted. It was felt that one man was not competent to deal satisfactorily with all the aspects of college work, that the representations of a body would carry greater weight than those of an individual, that there should be room for the participation of different colleges in a work in which all were interested, and that a limited tenure of office would prevent the board from becoming the preserve of a clique. " There were some," says Mr. de la Fosse, " who suspected evil in what they feared might become a system of meddling or espionage; others disliked it as a new-fangled measure calculated to lower the dignity of university education. All such misgivings have been falsified and no one now, who has had experience of it, doubts the value of the visits of the board. * * * * * All the colleges have been inspected at least once during the quinquennium and some two or three times. The work has been done with tact and thoroughness and above all with good-will. The colleges have felt that they have been helped as well as criticised, and if the syndicate has had to apply both the curb and the spur it has resulted in no lasting resentment." The arrangements made in various universities differ considerably. They are shaped largely in accordance with the number of institutions, the supply of men available for inspection and the existing facilities for getting about the country. The almost universal opinion is that inspection has been successful. It has led to improvements in the colleges and has tightened the bonds of unity between them.

(e) *Control of students.*

120. It may be added, in this connection, that the universities frame regulations touching the transfer, conduct, punishment and residence of students in affiliated institutions. These regulations differ in respect of detail.

Limitations of power.

121. It will have been gathered from the foregoing paragraphs that the power of the universities is to some extent limited. First, the Chancellor has, in the two younger universities, the privilege of nominating the Vice-Chancellor; in all universities he nominates a considerable number of the fellows, approves the election of fellows, can declare vacant the office of any ordinary fellow who does not attend a meeting other than convocation during a year, and can (sometimes under restrictions) cancel a fellowship; and, as will presently be seen, he confirms honorary degrees. Other powers are exercised by the government, *i.e.*, in the case of Calcutta by the Government of India, in the case of other universities by the Local Government within whose jurisdiction is situated the headquarters of the university. In the three older universities, the Governor General or the Governor in Council nominates the Vice-Chancellor. The list of offices carrying *ex-officio* fellowships may be changed (provided the maxima allowed by law are not exceeded) by government notification. The bestowal and withdrawal of affiliation rest with them; the university can record its opinion, but the government pronounces the verdict. The making or modification of regulations must receive the approval of government. Finally, at Calcutta, the sanction of the Governor General in Council is required to the appointment of university professors, readers and lecturers. The independence of the universities, however, is secured in various ways. The authority nominating to the senate is bound by the law to select not less than two-fifths of his nominees from among persons following the profession of education—a rule which considerably narrows choice. Nor has the government any power of initiative in the matter of disaffiliation of colleges, the alteration of regu-

lations once passed, or the addition of new regulations. And (save as specified above) it has no power in the recognition of schools or its withdrawal. This last point is peculiar, since it gives the university a measure of control over high schools (a class of institutions intimately connected with the general school system) which, in the case of colleges, rests with the government. Above all, the powers of framing courses and conducting examinations are of the highest importance and affect large numbers of institutions spread over wide areas. There are few, if any, universities in the world which exercise so far-flung an influence as does the Calcutta University, with its 56 affiliated colleges and its jurisdiction over an area of 491,000 square miles and a population of nearly 104,000,000.

III.—Courses, examinations and degrees.

The faculties. 122. The three older universities possess the faculties of arts, law, medicine and engineering. Calcutta also separated the faculty of science from that of arts in its new regulations. The Punjab University has arts, science, law, medicine and oriental studies; it has combined engineering (in which only a licentiate is offered) with science. Allahabad has arts, science, law and medicine—the last recently added.

The courses. 123. Under these faculties are combined various courses. At Bombay and Madras the science courses (which at Madras have no separate nomenclature) are arranged under the faculty of arts. Every university save Bombay offers a course subsequent to graduation and leading up to a second degree or a licence for the preparation of teachers. The faculty of medicine now includes various courses, such as public hygiene. Bombay offers degrees in agriculture and commerce—the latter recently instituted. Madras and the Punjab confer oriental titles. The arrangements made for courses, examinations and degrees will be found in detail in the diagrams and appendices in volume II of this review. The second of these appendices shows the subjects taken in the arts and science graduate courses. It will suffice here to give a general outline.

The arts and science courses are open to candidates immediately after they have matriculated and lead after two years to an intermediate examination and after a further two years to a degree examination. Yet another one or two years lead to an examination for the degree of M.A. or M.Sc. After an interval the doctorate is obtained by presentation of a thesis to which is added in some cases the passing of an examination. The study of law commences after graduation in arts or science and continues two or three years before the bachelorship in law can be obtained. There are further degrees of master and doctor of law. The medical courses begin generally after the intermediate stage—earlier at Calcutta and Bombay. They lead first to the bachelor's degree; after which practice in the profession and examination earn the doctorate in medicine or some distinctive degree in surgery, hygiene, etc. The course for the degree of bachelor of engineering commences generally (but not always) after the intermediate. The Punjab University offers only a licentiate obtainable two years after matriculation. The Punjab University has a complete course, parallel with the arts course, in oriental studies, and maintains an Oriental College, which endeavours to carry out the dissemination of western knowledge through the medium of the local vernaculars and the encouragement of the study of classical and vernacular languages. "To these ends," says the report of the university, "the work of the college is planned on a double basis, one leading to degrees in oriental learning and the other preparing for the various oriental titles examinations, and embracing literary courses in Sanskrit, Arabic and Persian and certain vernacular languages." The Madras University has also quite recently instituted title examinations in oriental classics. Bombay offers a degree in agriculture and has recently instituted one in commerce. These courses, save under certain exceptional circumstances, or in the higher degrees such as that of doctor, must be studied in colleges affiliated in the subjects offered and to the degree sought.

Honours. 124. Honours are obtainable at the degree examinations, save at Allahabad. Ordinarily the honours course includes the pass course and is taught along with it, but involves more advanced study in one of the subjects chosen

and success in additional question papers. At Madras, however, the course is different and will, by recent regulations, be spread over three instead of two years, displacing the examination for the M.A. degree, which will then be conferred on payment of a further fee two years after graduation with honours.

Examinations.

125. The ideal examination involves an oral or (in science) a practical test. This is facilitated by examination at a single centre. Such examination, however, is difficult to arrange in affiliating universities exercising a widespread jurisdiction. Hence we find that for the lower examinations different centres are permitted. Calcutta and Madras do not insist on a single centre for the ordinary degree examinations and have abandoned the oral, while retaining the practical, test. Allahabad, though imposing the oral test for the B.A., has conceded a centre for that examination at Nagpur. Bombay and the Punjab retain the headquarters of the university as the sole centre for degree examination, though the former has no oral test.

Examination fees.

126. Fees are paid for examinations. The fee for the I.A. and I.Sc. ranges from Rs. 20 to Rs. 25, for the B.A. from Rs. 20 to Rs. 35, for the B.Sc. from Rs. 20 to Rs. 40, for the M.A. and M.Sc. from Rs. 20 to Rs. 50. For examinations in law and medicine fees of Rs. 15 to Rs. 200 and of Rs. 10 to Rs. 100, respectively, are charged. The Madras University requires an additional fee of Rs. 10 and Rs. 50 for the preliminary and final honours examination in English at the B.A.

Examiners.

127. Examiners are appointed by the syndicates on the advice of the boards of studies and sometimes subject to the general control of the senates. Both setters and examiners of papers are paid. The problem of maintaining a uniform standard and tempering the mechanical system of marks (which still obtains in all universities) is one the difficulty of which increases with the number of candidates. The regulations or rules of the Calcutta, Punjab and Allahabad Universities deal with the subjects of moderators, head examiners and re-examination of papers. The Calcutta regulations are particularly explicit. There the members of faculties and the heads of colleges first suggest the names of examiners. The boards of studies consider these suggestions and make nominations. The syndicate finally appoints; and its appointments are not limited to the nominations. The syndicate also appoints boards of examiners for the setting of papers. For the intermediate and degree examinations in arts and science these boards may include no one who is actually teaching for the examination. For the M.A. and M.Sc. examinations, the boards consist of the university lecturers in the subject concerned together with others (who are not engaged in preparing candidates). Each board meets in Calcutta to apportion the setting of papers. There is also a meeting of the setters and the examiners of papers as soon as the examination is over to determine the standard and system of marking. A third meeting is held when the results have been worked out and tabulated; at this meeting a report is drawn up. The reports are received by five members of the syndicate who are appointed moderators, and are submitted with further reports to the syndicate along with recommendations for grace. Notwithstanding these precautions complaints as to variation of standard are not infrequent. The Bengal report treats of the astonishing variations which have taken place in standards during the quinquennium and urges the need of inquiry. It appears that the percentage of passes in the first division at the matriculation to the total number of passes has risen from 12·3 in 1906-07 to 50·9 in 1911-12, and that at the intermediate in arts from 8·7 to 24·5. The percentage of actual passes in those examinations, however, while it has shown a tendency to rise, has remained fairly steady. But the percentage of passes in the B.A. examination has risen from 23·5 in 1901-02 to 37·7 in 1906-07 and to 60·9 in 1911-12.

Examination by compartments.

128. A tendency is observable towards examination by compartments. The B.A. and B.Sc. examinations at Madras are held in two parts at intervals of one year. The Punjab University has introduced re-examination in a single subject for those who fail at the degree test. At Bombay a previous examination in the middle of the intermediate course (which disposes of English in the case of science students) has long been a feature; this examination may now be replaced by a certificate from the head of the college. The

professional courses are characterised by annual examinations dealing with the subjects prescribed for each stage.

Honorary degrees.

129. Honorary degrees are conferred on eminent persons who are recommended by the Vice-Chancellor and at least two-thirds of the other members of the syndicate; the recommendation is made to the senate; and, if two-thirds of those present are in favour of it, it is referred for confirmation by the Chancellor.

Modification of courses.

(a) In arts.

130. Looking broadly at the changes effected during the quinquennium, we see that the tendency is towards concentration of study and the crystallisation of alternatives into groups or schools of subjects which are more or less correlated with each other. The course for the B.A. now consists in all universities of English *plus* either two subjects or one subject or one group of subjects chosen from a list (in the case of Calcutta vernacular composition forms a second compulsory subject). Bombay has recently reduced its degree course from four to two subjects—a change regarding which the principal of the Elphinstone College remarks that the danger is that the B.A. degree will in future be gained much too cheaply and that the graduate will emerge no longer with a general smattering of four subjects, but with an equally superficial knowledge of two only. Nevertheless the change is suggestive of at least a potential improvement in attainment. Looked at from the point of view of combination, the courses at Bombay and Madras present a strict grouping; at Calcutta and Allahabad a freer choice of combinations has been adopted (and at Allahabad the power of selection has recently been increased), but limited within general groups, and, in the latter case, by a narrow field of alternatives; the Punjab offers unrestricted choice. From the point of view of specialisation in arts or science subjects, Allahabad is the only university which excludes science wholly from its B.A. course; Madras, though the nomenclature of science courses has not been adopted, in reality distinguishes rigidly between arts and science by correlation between the intermediate and degree courses and by prescribing, for the B.A., English with either an arts or a science group; at Calcutta both of the elective subjects may, and one must, be an arts subject; Bombay and the Punjab permit the combination of English with wholly science subjects—an arrangement which, however, does not stultify the distinction between arts and science courses for the reasons that at the former university English is not studied for the B.Sc., at both the choice of science groups or subjects is more limited than in the B.Sc., and in the Punjab it is restricted to three subjects, one of which must be astronomy, a branch of study which will disappear from the B.Sc. course in 1914. Symptomatic of the same tendency are the complete removal of science subjects from the M.A. at Bombay and the institution of a M.Sc. degree; and, in the Punjab University, the recognition of history and economics as two separate subjects, the changes in the curricula to emphasise practical work in science, the insistence on two laboratory subjects for the B.Sc., and the abolition of English poetry as a subject for the same examination.

(b) In law.

131. The most notable change in the law courses has been the prolongation of the course at Calcutta to (ordinarily) three years, the general stiffening up of conditions and the concentration of law classes at large centres. Another is the abolition in the Punjab of the lower grade examinations qualifying for a certificate and a licentiate in English or vernacular.

(c) In medicine.

132. There have been two great reforms in the faculty of medicine. One is the continued tendency to do away with the lower grade courses leading to the licentiate in medicine and surgery. These are retained only at Bombay and Madras and are now in process of abolition at Bombay. The second is the specialisation which increasingly marks the courses subsequent to graduation; these now lead to different degrees, such as the M.D., M.S., and (at Bombay) bachelor of hygiene—a degree which is now necessary before the candidate proceeds to the M.D. in sanitation. (It is to be observed that before the commencement of the quinquennium Calcutta already possessed four degrees at this stage—the M.D., the M.S., the master of obstetrics, and the diploma of public health.)

(d) In engineering.

133. Similar changes are taking place at Bombay in the engineering courses. Those leading up to the licentiate are being abolished and replaced

by courses which qualify for bachelorships in three distinct departments—civil, mechanical and electrical engineering. At Calcutta also the degree course has been split into three—for civil, for mechanical and electrical and for mining engineering.

134. The brief description given will suffice to show that there is a steady but cautious working towards specialisation and an arrangement of courses calculated to make for higher efficiency. The details of the courses are too long for insertion in this chapter and will be found in volume II. But even the lengthier description there given treats only of the dry bones—of periods of study, of subjects and of examinations. It cannot reproduce the curricula contained in the university calendars. Still less can it clearly indicate that which is the matter of greatest interest—the attainment of the students who have successfully passed the tests. That is a question in answering which the personal equation both of candidate and examiner is of prime importance. The Indian B.A. or B.Sc. has a good knowledge of some of Shakespeare's plays, of Milton, of certain prose works on literature and other subjects; in addition to this he may have a very fair acquaintance with the Sanskrit or Arabic classics (though not so deep or so wide as that of Latin or Greek possessed by the English undergraduate who has just begun reading, say, for honour moderations); or he has read and remembered Mill and various text-books on ethics and psychology; he has perhaps studied the differential and integral calculus, dynamics, and hydrostatics, or he has completed a course in physics or chemistry similar to, or slightly higher than, that offered at a good English secondary school—but generally under far better laboratory conditions and supervision. If this amount of acquisition appears rather disappointing it must be remembered that he takes his degree at an age when the English boy is just entering his college career or has accomplished the first year of it, and that a foreign language is the medium of instruction in the course and of expression in the test. It is still more difficult to appraise the power gained of reasoning and of application of this knowledge. A frequent complaint is that the college student generally comes ill-equipped from a school where method, mental discipline and inspiration are lacking. The depressing effects of inferior school education form a prime factor in the college career. The first two years are properly occupied in repairing deficiencies. Given that such repair is carefully carried out, the progress made between the intermediate and the B.A. degree stage is remarkable. The pity is that the period is too short. Assiduity and a strong power of memory make rapid acquisition possible. But haste is inevitable and does not make for assimilation and consolidation. Continuation of study to the M.A. stage rectifies this shortcoming and produces many excellent scholars. And, as regards the average graduate, it is right to remember that the Englishman who judges him is generally one who has taken honours and hence is apt to judge the pass man by an honours standard. *Attainment of students.*

IV.—University teaching.

135. The earlier Acts specified that the Indian universities were established for the purpose " of ascertaining, by means of examination, the persons who have acquired proficiency in different branches of literature, science and art, and of rewarding them by academical degrees as evidence of their respective attainments, and marks of honour proportioned thereunto." The Act of 1904 included among their duties provision for the instruction of students, the power of appointing university professors and lecturers, the management of educational endowments, the equipment and maintenance of university libraries, laboratories and museums, and other things besides. The teaching activities of universities have developed during the quinquennium. The progress has been mainly along three lines—the maintenance of institutions, the provision of instruction for the master's degree, and the appointment of professors with a view to encouraging higher study and research. *Operation of the Act of 1904.*

136. At the beginning of the quinquennium there were two colleges managed by a university—the Law College and the Oriental College at Lahore. There was also a university law school at Allahabad. To these have now been added a university law college at Calcutta, which is a portion of the (*i*) *University colleges.*

general scheme of reform in law-teaching under that university. It will be noticed hereafter.

(ii) M. A. teaching.

137. The Calcutta University has to some extent centralised post-graduate teaching in Calcutta. The conditions of affiliation for M.A. and M.Sc. courses are difficult and but few colleges have complied with them. The university has established three kinds of appointment—professors, readers and lecturers. A professor is a whole-time servant of the university paid from funds set apart for the endowment of the chair. A reader is one who delivers special courses of lectures and receives an emolument. A lecturer may or may not be a teacher in a college, and is appointed for a term of two years, during which he delivers lectures and may receive (though not necessarily) a remuneration. Any of these three kinds of instructors may undertake research or other post-graduate work. The reader generally delivers a short course of highly specialised lectures. The professors are the Tagore professor of law and the Minto professor of economics, both of whom, among other duties, deliver lectures for the mastership degree. This duty, however, so far as it is not carried out in the affiliated colleges, devolves mainly on the university lecturers. In any college which has full affiliation to the M.A. or M.Sc. in a subject, the professors who lecture on that subject become *ipso facto* university lecturers. The senate likewise appoints other college professors and persons not primarily engaged in teaching. These deliver lectures open to all honours graduates of Indian universities in the particular subject. The arrangement has the effect of offering facilities to students of colleges which have no affiliation to the master's degree. There are now, in Calcutta, nearly 50 lecturers in arts subjects with some 550 students preparing for the mastership. University lecturerships have been established in Madras for honours students. Lecturers were first appointed just after the close of the quinquennium.

(iii) Higher study and research.

138. The facilities for research comprise professorships, fellowships and scholarships. (*a*) *Professorships.*—The Calcutta University has the endowed Tagore professorship of law; and the generous gift of Sir T. Palit has now provided funds for the maintenance of science professors. There is an endowed Wilson lecturership in languages and literature at Bombay, the Sadho Lal readership in Sanskrit or Prakrit studies at Allahabad. Other chairs are supported by grants from government. Such is the Minto professorship of economics at Calcutta, founded in 1909, towards which the Government of India have annually contributed Rs. 10,000 a year. Scholars of high distinction are also appointed as readers to deliver courses of lectures on special studies. During the period under review Doctors Thibaut, Sen, Schuster, Walker, Brojendranath Sil, Cullis, Mallik and Yamakami, Sir T. Holland and the late Professor Pischel delivered such lectures in Calcutta. Just at the close of the quinquennium the Government of India also gave recurring grants aggregating Rs. 2,55,000 to enable the universities to make a definite step forward towards the realisation of the idea of a teaching university, for higher work and to improve the inspection of colleges. From a portion of this income the Calcutta University are founding a George the Fifth professorship of mental and moral science and a Hardinge professorship of higher mathematics. From their own funds they are likewise founding a chair of ancient Indian history. The Punjab University are also about to found, by the aid of this grant, two lecturerships to be held by specialists during the cold weather. The universities of Bombay and Allahabad are making similar proposals. (*b*) *Fellowships, etc.*—There are quite a number of endowed prizes and scholarships at the different universities. Some are of sufficient value to attract students (though not in large numbers) to research. Such are, at Calcutta, the two Premchand Roychand scholarships, of the annual value of Rs. 1,400 each, one awarded in a literary and one in a scientific subject, as well as many other minor scholarships; at Bombay the Springer research scholarship (with an endowment of Rs. 43,000), the Munguldass Nathoobhoy travelling fellowships, the Duke of Edinburgh fellowship, the Mohobat fellowship and others—this university possesses over a hundred endowments; at Madras the endowments are generally of smaller amounts (the university founded during the quinquennium certain research studentships, but the reports on students did not warrant the award); the Punjab

has six endowed studentships; at Allahabad, the Empress Victoria readership (with an endowment of Rs. 76,000) was founded in 1909 for research in science and the translation of a science work into the vernacular.

Besides these, the government have placed at the disposal of the Indian universities in rotation two scholarships annually of £200 per annum tenable for three years. These are awarded by the universities concerned to selected Indian candidates with a view to the completion of their studies either at Oxford or at Cambridge. The selected scholars also receive second class passage each way.

V.—Numerical progress, buildings, etc.

Numbers of institutions and students.

139. The universities have jurisdiction over native states as well as over British provinces. Hence the general tables do not give a full idea of their activities. A set of special tables has been prepared from figures supplied by the universities, giving the full number of institutions and students. These will be found in appendix VII. They show 179* affiliated colleges, of which 56 belong to the Calcutta University; and 36,533 students, of whom 14,807 are in colleges affiliated to Calcutta. It is noticeable that, while the Madras University is second, the number of its colleges is 49, and that of its students only 7,152. That is to say, while the average enrolment of a college affiliated to Calcutta is 264, that of a college affiliated to Madras is only 146. The schools recognised by universities number 1,385† and their pupils 407,462. The numbers of schools and pupils under the Calcutta University are 618 and 143,625.

In this connection mention may be made of a small point, namely, the connection of educational institutions in Ceylon with those of India. In the last review Mr. Orange stated that under the Act of 1904 Ceylon had been transferred to the sphere of influence of the Madras University, but its nine colleges had not yet been affiliated. This condition of things still exists. The colleges of Ceylon have never been affiliated to the Madras University; but as a temporary measure students who had attended colleges affiliated to the University of Calcutta were allowed to appear for the examinations in Madras under the old bye-laws. These examinations have now been superseded by those prescribed under the new regulations. Two colleges in Ceylon applied for affiliation to the new examinations, but after a local inquiry the applications were withdrawn. Six high schools (four of which are termed colleges) in Ceylon are, however, recognised by the Madras University for purposes of matriculation examination. But it is understood that the large majority of schools and colleges in that island now prepare their students mainly for the Oxford and Cambridge locals and the London University examinations. Those who wish to study for the Madras examinations must after matriculation attend some affiliated college in Southern India.

Number of examinees.

140. As regards examinations, the numbers of those who, in 1911, appeared and passed at different stages were, at the doctorate stage, 5 and 3, at the master's stage 587 and 348, at the bachelor's stage 7,559 and 4,098, and at the intermediate stage 13,699 and 7,094. The totals of those who appeared and passed in university examinations were thus 21,996‡ and 11,656.‡ Of the examinees about 10,068 were non-Brahman Hindus, about 8,374§ were Brahmans, 1,746 were Muhammadans, 750 were Indian Christians, 693 were Parsis, 171 were Europeans or Anglo-Indians, 92 were Buddhists and the remainder belonged to other races or religions. In the arts courses the number of Brahmans is almost equal to that of non-Brahman Hindus

* It may seem strange that while affiliated colleges throughout all India number 179, colleges in British India alone appear from general table III to be still more numerous—186. The reason is that general table III contains many colleges (oriental and professional), which are not affiliated to any university and hence do not figure in the university tables. The number of students shown by the universities is larger, owing to the comparatively large size of arts colleges.

† The number of high schools here shown exceeds that shown in general table III by 31. But the pupils fall short of those in the general table by 303. The general table contains a certain number of schools which are not recognised. One may hazard the explanation that these schools are ordinarily larger than affiliated schools in native states.

‡ Including 146 candidates and 113 passes in Engineering which the Punjab University has not shown in detail but has included in the column for 'total.'

§ The figures for Brahmans and non-Brahmans have been calculated partly on a proportion, since the University of Bombay has not distinguished between them in its returns.

(5,619 against 6,035) and under the Madras University amounts to 1,898 out of a total of 2,786 candidates of all races and creeds. In the year, 18,317 candidates appeared at the matriculation, of whom 9,986 (or 54·5 per cent.) were successful (see appendix VII).

The Calcutta University again heads the list with 6,174 candidates and 4,341 passes. In the examination which took place just after the close of the quinquennium, no less than 8,862 candidates appeared. The percentage of success is also highest in that university, being 70·3 against 51·6, 50·4 and 42·0 at the universities of the Punjab, Bombay and Allahabad. The matriculation for the Madras University has become almost extinct, owing to the popularity of the school leaving certificate. There were only 782 candidates in 1912, with 164 passes—a percentage of success amounting to only 21·0. In the same year no less than 7,372 candidates appeared in Madras, Hyderabad, Travancore and Cochin (all within the jurisdiction of the Madras University) for the school leaving certificate. The numbers of those who took the bachelor's degree in different subjects are—in arts 2,415, in science 280, in law 1,063, in medicine 159,* in engineering 45, in teaching 114, and in agriculture 22. It is not possible to compare these figures with those of former years, because similar figures have not previously been collected. A comparison for British India is possible; but (especially as it includes colleges and schools not directly connected with universities) will more conveniently figure in the next two chapters.

Expenditure.

141. The total expenditure shown in table IV was Rs. 15,87,470 as against Rs. 10,38,312 in 1906-07. The expenditure is largely met from fees (such as examination fees), which amount to Rs. 9,72,286. Other private sources contribute Rs. 4,41,658, and government grants Rs. 1,73,526. This is a case in which the form of general table IV (otherwise convenient) is found faulty, because the current expenditure of universities is ordinarily less than the income, and balances available for buildings or investment are thus accumulated. The income and current expenditure of the universities for the last year, as shewn in university reports, etc., are as follows :—

	Receipts.	Expenditure.	Balance.
	Rs.	Rs.	Rs.
Calcutta	12,06,676	7,13,372	4,93,304
Bombay	2,05,714	1,59,543	46,171
Madras	2,37,394	2,14,043	23,351
Punjab	2,33,007	2,01,027	31,980
Allahabad	1,66,510	1,28,749	37,176
TOTAL .	20,49,301	14,16,734	6,32,567

The receipts in Madras have been depressed by the loss of matriculation fees. To balance this, government gave, in the year 1911-12, Rs. 23,500. This sum is shown in the statement above. The accounts for Calcutta, Allahabad and Madras include as expenditure Rs. 2,42,000, Rs. 40,000 and nearly Rs. 10,000 respectively on investments. These are not shown in the statement above. The expenditure shown in general table IV includes the capital cost of buildings, libraries, etc.

Imperial grants.

142. With the new conditions brought about by the Act of 1904, the financial circumstances of universities changed. Previously their only charges had been the pay of a few salaried officers and the cost of conducting examinations. These were covered by examination fees. The increase in their administrative functions which the Act entailed, the new responsibility of inspection, and the added task of instruction, created new calls on the

* Including licentiates.

university exchequers. It was also deemed desirable to pay the travelling expenses of fellows and syndicate-members (who had previously defrayed the cost themselves). Still more important was it to enable colleges (particularly aided colleges) to meet the new requirements which the Act and the resultant regulations threw upon them. Accordingly in 1905, the Government of India announced a recurring grant of five lakhs of rupees to be continued for five years. Of the total of 25 lakhs, 11½ lakhs were allotted to universities for administration, inspection, travelling charges, the purchase of land and the erection of buildings; 13½ lakhs were given to Local Governments for the improvement of colleges. These grants have enabled universities to pay their way and (a desirable result) to accumulate balances for capital expenditure. The grants to Madras and the United Provinces were made permanent before the expiry of the five years. They were renewed to other provinces for a further year, then (with a slight modification) for three years and finally made permanent with effect from 1911-12. Furthermore, in 1912, grants of 16 lakhs non-recurring and 2·55 lakhs recurring were made to universities. The total of the recurring grants to each province and university is shown in tabular form.

Province and University.	Grants as made permanent or renewed in 1911-12			Grants of 1912 to Universities.		Total recurring grants		
	for Colleges.	for Universities.	Total.	Non-recurring.	Recurring.	to Provinces.	to Universities.	Total.
	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
Madras and Madras University	80,000	25,000	1,05,000	4,00,000	65,000	80,000	90,000	1,70,000
Bombay and University of Bombay.	45,000	10,000	55,000	3,00,000	45,000	45,000	55,000	1,00,000
Bengal and Calcutta University.	1,10,000	50,000	1,60,000	4,00,000	65,000	1,10,000	1,15,000	2,25,000
United Provinces and University of Allahabad.	40,000	40,000	80,000	3,00,000	45,000	40,000	85,000	1,25,000
Punjab and Punjab University	20,000	10,000	30,000	2,00,000	35,000	20,000	45,000	65,000
Eastern Bengal and Assam .	60,000	...	60,000	..	...	60,000	...	60,000
Central Provinces and Berar .	10,000	...	10,000	...	...	10,000	...	10,000
TOTAL .	3,65,000	1,35,000	5,00,000	16,00,000	2,55,000	3,65,000	3,90,000	7,55,000

Thus the grants made to universities (exclusive of those made for the benefit of their constituent colleges) have amounted since 1905 to Rs. 16,00,000 non-recurring and from Rs. 1,35,000 to Rs. 3,90,000 recurring. In addition Rs. 45,000 recurring was given in 1912-13 towards the proposed university at Dacca. No grant was given in 1905 to Burma, college education in that province being on a small scale. But since the close of the quinquennium grants have been made for a university at Rangoon, as well as at Patna, and further provision has been made for Dacca, while new capital grants have also been given to other existing universities.

Utilisation of grants.

143. The subject of the utilisation of these grants will be a matter for the next quinquennial review. All that is here necessary is briefly to indicate the part which they will play in developing the schemes to which allusion has already been made. At Calcutta the capital grant is to be utilised for examination halls, a law hostel and books and furniture for the university library, the recurring grant for the foundation of two university chairs termed the 'George the Fifth Professorship of Mental and Moral Science' and the 'Hardinge Professorship of Higher Mathematics,' for an additional allotment to the university law college and (as an experimental measure) for the appointment of university lecturers. A portion will also be used for the maintenance of a laboratory in connection with Sir T. Palit's gift of fourteen lakhs for science teaching. Furthermore the university out of their own funds are founding a professorship of Indian history and antiquities. The Bombay University have proposed improvement of the library and buildings for post-graduate students, the engagement of eminent professors from abroad to lecture during the cold weather and the institution of inter-collegiate M.A.

courses. The most striking proposal from this university, however, is the temporary appointment of an expert educationalist of wide experience from England for a fixed time to visit the affiliated colleges and advise on higher courses and the selection of professors and lecturers. No decision has yet been arrived at on the utilisation of the grants to Madras. The most important proposals of the Punjab University are the erection of a suitable building for the Oriental College and of hostels for the students of the Oriental and Law Colleges, the establishment of two lecturerships to be held by specialists of Europe or of India during the cold weather and the improvement of the staff of the Oriental College. The grants for Allahabad will be used for the establishment of a library and of a hostel for law students and the creation of chairs in Indian history and economics. The proposals had at the time of writing been sanctioned for all the universities—save those from Madras which have not yet been received.

Publications.

144. The Calcutta, Madras and Punjab Universities issue publications intended to be studied as a part of the prescribed course. At Calcutta these comprise English, Sanskrit, Arabic and Persian selections, Sanskrit and Arabic grammars (these are selections and grammars for the matriculation, intermediate and B.A. examinations) and a number of selections of leading law cases. In 1910-11, the university appears to have made a substantial profit from the publication of these works. The Madras University has published selections in English, Sanskrit and vernaculars for the matriculation. The Punjab University publishes Arabic and Persian selections for the intermediate and B.A. Lectures, theses, etc., are also frequently published and sold.

Improvement in buildings.

145. Each university is gradually acquiring a local habitation worthy of its position. Calcutta has long had its impressive Senate House in College Square. During the period under review it has added the Maharaja of Darbhanga building, which accommodates the library, the law college, offices, etc., as well as examination rooms to seat about a thousand candidates. The building cost nearly six and-a-half lakhs, to which the Maharaja Bahadur contributed two and-a-half lakhs, government about two lakhs and the university the remainder. An adjoining plot of land has been purchased at a cost of a lakh and-a-half and a building has been erected for a law hostel and examination halls. The cost will be four lakhs, to which the Government of India has contributed three lakhs. Sir T. Palit's recent gift of property worth fourteen lakhs will permit of the erection of university laboratories for practical examinations and research work.

At Bombay the convocation and the meetings of the senate are held in the Sir Cowasji Jehangir Hall, which was made over to the university in 1875; the library and the Rajabai Tower date from 1864 and were the gift of Mr. Premchand Roychand. Madras has a fine Senate House; the library is located in a portion of the Connemara Public Library. At Lahore, the only university building was the Convocation Hall till, in the last year of the quinquennium, a convenient library was built, with a reading room above. Allahabad had no buildings of its own, and utilised those of the Muir Central College; but a fine Senate Hall (costing nearly six lakhs of rupees) has now been erected and was opened just after the close of the period.

The principal capital requirements of the universities are buildings for the colleges under their management, hostels for the residence of the students, especially those of the law colleges, and library-halls. At the end of the quinquennium the Government of India distributed a grant of sixteen lakhs of rupees which will assist in removing some of these wants.

Libraries.

146. Another need is that of collections of books. Here also the grants recently made will be of help. The Calcutta University library has recently been placed in the Darbhanga building, and improved by the expenditure of Rs. 70,000 for books. A further sum of a lakh of rupees is now to be expended from the imperial grant. Bombay has a library of about eight thousand volumes which is not very largely used. Madras commenced a library fund in 1906, with a sum bequeathed by Mr. Griffith and a grant from government; twelve thousand books have been purchased and there is still a

fair sum in hand. The books are at present in the Connemara library. It is proposed to erect a separate building. The Punjab University has not only housed its library, but, with the help of the earlier imperial grant, has doubled the number of volumes, while 7,500 volumes (including the Percival collection—the gift of Mr. H. M. Percival, lately a professor in the Presidency College) have been presented. The University of Allahabad possesses no library worthy of the name, but is about to spend a considerable sum out of the imperial grant on this object.

Photo.-Mechl. Dept., Thomason College, Roorkee.

NEW LABORATORIES, PRESIDENCY COLLEGE, CALCUTTA.

Photo - Mechl. Dept., Thomason College, Roorkee.

PRACTICAL WORK IN ELECTRICITY, PRESIDENCY COLLEGE, CALCUTTA.

Photo.-Mechl. Dept., Thomason College, Roorkee.

QUEEN'S COLLEGE, BENARES.

Photo.-Mechl. Dept., Thomason College, Roorkee.

MUIR CENTRAL COLLEGE, ALLAHABAD.

Photo.-Mechl. Dept., Thomason College, Roorkee.

DACCA COLLEGE.

Photo.-Mech! Dep't Thomason College, Roorkee.

BISHOP'S COLLEGE, CALCUTTA.

Photo.-Mechl. Dept., Thomason College, Roorkee.

COTTON COLLEGE, SCIENCE DEPARTMENT, ASSAM.

CHAPTER VI.

ARTS COLLEGES.

I.—Progress in the quinquennium.

147. The bulk of the instruction leading up to the university examinations is conducted in affiliated colleges. A list of the colleges affiliated to the universities is given in supplemental table no. 37. The distribution by universities is as follows :— *Number of colleges.*

Universities.	Number of affiliated colleges in 1907.	Number of affiliated colleges in 1912.	Change.
Calcutta	55	54 (*a*)	- 1
Bombay	15	15	...
Madras	53	49	- 4
Punjab	21	20 (*b*)	- 1
Allahabad	32	34 (*c*)	+2
TOTAL	176	172	- 4

The diminution is due mainly to a number of nominal collegiate classes for Europeans and a few others being deprived of affiliation or amalgamated; against these there are some new affiliations. The details are given in supplemental table 37.

148. The figures shown in the preceding paragraph are compiled from the university calendars and differ from those given in provincial reports and reproduced in general table III (volume II). This is due to two causes. First, the university figures show 26 colleges in native States and one in Ajmer-Merwara which are not included in the reports from British provinces. Second, there are certain institutions, such as the Thomason Civil Engineering College, Roorkee, the Agricultural Colleges at Cawnpore and Lyallpur, the Veterinary College, Lahore, and a number of oriental colleges which are not affiliated to any university and do not present candidates at university examinations. Excluding the former and including the latter, we find the total in British provinces is 186 colleges with 36,284 students. There are some other colleges, *e.g.*, the Agricultural College at Pusa, the Veterinary College at Belgachia, Calcutta, and the Medical College, Madras, for which no statistics have been furnished in the provincial reports (figures have been collected in the chapter on professional colleges). Of the 186 colleges, 46 are professional—for the study of law, medicine, engineering, teaching, etc. These will be dealt with elsewhere. Of the remaining 140, seventeen are oriental arts colleges, the treatment of which belongs to the chapter on oriental studies. There remain 123 English or ordinary arts colleges. It is with these that the present chapter is concerned. The figures regarding them are found in supplemental tables 38 and onwards. And a map is given in volume II showing their distribution.

149. While the number of colleges has fallen from 127 to 123, that of students has grown to 28,196. This increase is quite unparalleled. Twenty years ago, there were 8,060 students in colleges. Between 1902 and 1907, the increase was less than 1,000. In the present quinquennium the increase has been from 18,001 to 28,196 or by over 10,000. The increases have been particularly large in Bengal and Eastern Bengal and Assam, and, though the actual figures are much smaller, in Burma and the Central Provinces. In all these provinces save Bengal the numbers have considerably more than doubled. Of the total increase of 10,195 students, no less than *Number of students.*

(*a*) Excludes two law classes.
(*b*) Excludes two schools of engineering.
(*c*) Includes King George's Medical College but excludes four law classes.

6,318 are accounted for in Bengal and Eastern Bengal and Assam. This is the more remarkable since in the previous quinquennium the number of students in Bengal had decreased. Mr. Orange attributed this to oscillations in the matriculation results. The figures regarding the passes under the Calcutta University which have already been mentioned in paragraph 127 may have considerable bearing on this point, though undoubtedly another factor has been the rush into secondary education. The sudden expansion has put a considerable strain upon institutions. In Eastern Bengal and Assam additional professors had to be appointed and temporary hostels opened. In the Presidency College, Calcutta, certain principles had to be laid down for regulating admissions. The first of these was preference for pupils who had passed the matriculation in the first division, but it was of little use owing to the unprecedented number fulfilling this condition. Mr. Prothero gives some remarkable figures as to the number of applicants for a limited number of vacancies in the classes, but adds, " It must be remembered however when endeavouring to draw conclusions from these figures that a very large number of students put their names down for the Presidency College without the slightest intention of actually taking admission—many of them in the vague hope of obtaining free studentships."

Management of colleges.

150. Twenty-three of these colleges are maintained by government, five (in Madras and Bengal) by municipalities,* three by native States in Bombay, the remaining ninety-two are privately managed, and sixty-two of these are in receipt of aid. Of the colleges under private management, 40 are connected with missions, the rest are maintained by societies, committees or private individuals. A college maintained by an individual must, however, be administered by a governing body—the existence of which is now a condition of affiliation under the Act. The number of students in colleges under public management is 7,290; that in privately managed colleges is 20,906.

Classification of students.

151. Of the students, 279 are ladies—the largest numbers being 81 in Bengal and 76 in Bombay. As regards communities, the percentage of the members of each to the total is as follows :—

Europeans	·7
Indian Christians	3·1
Hindus { Brahmans	35·8
Hindus { Non-Brahmans	46·7
Muhammadans	9·8
Buddhists	·8
Parsis	1·8
Others (unclassified)	1·3

These figures represent the proportions of actual numbers of students in colleges. The numbers of those who passed the university examinations in 1911-12 are shown below :—

	Europeans.	Indian Christians.	Hindus. Brahmans.	Hindus. Non-Brahmans.	Muhammadans.	Buddhists.	Parsis.	Others.	Total.
M.A.	2	6	111	139	20	...	6	...	284
M.Sc.	...	...	17	28	2	...	...	...	47
B.A.	20	119	1,300	745	220	13	45	15	2,477
B.Sc.	...	4	107	137	7	...	6	4	265
I.A.	58	135	1,477	1,939	387	51	52	6	4,105
I.Sc.	5	1	191	423	28	2	3	...	653

The remarkable feature in these tables is the preponderance of Brahman students and successful candidates as compared with their proportion (4 per cent.) to the whole population.

* These are the colleges of Salem, Palghat and Tellicherry in Madras; Midnapur and Moughyr in Bengal. The last named is managed by a joint board of the municipality and the district board.

152. Expenditure on arts colleges has risen from Rs. 30,12,000 to Rs. 47,26,000. The sources from which income is drawn are provincial funds, whose contribution has increased by Rs. 5,25,000 to Rs. 16,96,000, fees, which contribute Rs. 18,43,000 (an increase of eight lakhs), and other heads, which contribute Rs. 10,17,000 (an increase of three lakhs). The average cost of maintaining a college is Rs. 38,423; that of educating a student is Rs. 175 a year. The cost per student varies for provinces mainly with the number of students. Where students are comparatively few, the cost is high—Rs. 394 in Burma and Rs. 387 in the North-West Frontier Province; where students are numerous it sinks—to Rs. 141 in Eastern Bengal and Assam and Rs. 135 in Bengal. Notwithstanding the growth in expenditure, so large has been the concomitant increase of students that the cost per head has risen by only one rupee in the quinquennium. The average fee paid annually by each student has increased by nearly eight rupees and now stands at Rs. 68-4-9 (about £4½). The variations are remarkable; they are shown below :— *Expenditure.*

Province.	Average annual fee paid by a student in an arts college.	
	1907.	1912.
Madras	65·9	85·3
Bombay	68·8	72·5
Bengal	54·3	64·7
United Provinces	66·0	71·5
Punjab	55·5	61·9
Burma	87·2	82·8
Eastern Bengal and Assam	47·6	50·2
Central Provinces and Berar	46·8	49·6
North-West Frontier Province	59·9	49·8
Average	60·7	68·3

The low rate in the last two provinces is natural by reason of their backwardness; but it is remarkable in Eastern Bengal and Assam.

153. There is a striking contrast between publicly and privately managed colleges. If fees be excluded, the income in the former is just below 13 lakhs, that in the latter is 14¾ lakhs. Yet colleges of the latter type are nearly three times as numerous as publicly managed colleges and educate nearly three times the number of students. It follows that privately managed colleges subsist largely on fees (a source of income which totals Rs. 12,41,482 in their case and Rs. 5,61,724 in that of government colleges), endowments and other revenues (the income from which is Rs. 9,78,000, while in government colleges it is almost absent). It seems therefore that privately managed colleges largely depend on the number of fee-paying students they are able to attract. And, as a potent method of attraction is a low fee-rate, we find that the rate in these institutions is Rs. 62 a year against Rs. 88 in government colleges, with the further result that expenses must be carefully kept down in colleges of the former type. The expenditure per student in a privately managed college is Rs. 138 a year; in a government it is Rs. 290 a year. Hence (with the exception of certain mission colleges where numbers are kept purposely low for purposes of tuition and supervision) colleges fall into two clearly marked classes according to their expenditure; and these classes correspond with management. A government college offers for an annual fee of Rs. 88 an education costing Rs. 290 a year; a privately managed college offers for an annual fee of Rs. 62 an education costing Rs. 138 a year. The contrast is perhaps most strikingly brought out by a comparison of colleges situated not far from one another in Calcutta. Three important typical colleges may be taken. The Presidency College is a government college, costing over 2¾ lakhs a year and containing 973 students, each of whom is educated at an annual cost of Rs. 304. The Scottish Churches College is a mission college, aided by government and costing rather less than 1¾ lakhs a year, which sum, however, does not represent the full pay of a staff largely composed of missionaries; it educates 1,116 students at an annual cost of Rs. 182. The Metropolitan Institution, managed by a committee composed mainly of the professors, is also aided by government; it costs Rs. 60,000 a year and educates 1,023 students, each of whom costs annually just less than Rs. 59; the whole of the cost

is met by fees (Rs. 52,000) and government grant; only Rs. 195 a year comes from other sources.

Scholarships. 154. Expenditure on college scholarships has risen from Rs. 2,79,300 to Rs. 3,45,200. Junior scholarships are those which are awarded on the result of the matriculation and are held for two years up to the intermediate. Senior scholarships, awarded on the intermediate, are tenable up to the degree. Bengal offers 109 junior scholarships varying from Rs. 10 to Rs. 20, and 37 senior scholarships of Rs. 20 and Rs. 25. Eastern Bengal and Assam has 81 junior and 33 senior scholarships of the same value as those in Bengal. And both these provinces have special scholarships for Muhammadans, aboriginals and those in straitened circumstances, and likewise post-graduate scholarships. Arrangements in other provinces are similar.

Grants for collegiate education. 155. Mention has already been made in the preceding chapter of the imperial grant intended to enable universities and privately managed colleges to conform with the regulations framed under the Act of 1904. The amount which in 1912 had been added to provincial settlements for the improvement of colleges was Rs. 2·45 lakhs. The amount annually contributed from public funds to aided colleges is now nearly five lakhs. The number of aided institutions has risen from 54 to 62. In Madras only has the amount of annual subsidy declined—from Rs. 1,09,000 to Rs. 84,000; in Bengal, the United Provinces and the Central Provinces, it has doubled; in Burma it has trebled (but still remains small, since there is only one aided college—the Baptist Mission College in Rangoon); in Eastern Bengal and Assam it has increased from *nil* (no college being on the aided list in 1907) to Rs. 43,000.

Buildings. 156. The amount expended on college buildings cannot be separated from that on buildings for other kinds of institutions. But the improvement during the quinquennium has been most marked. As the account of this involves allusion to individual institutions, it has been included in appendix VIII. Special mention, however, must be made of the extensive building operations in some of the mission colleges in Madras; the erection of well-equipped laboratories and hostels in many institutions under the Calcutta University, especially the laboratories of the Presidency College of which that for physics is described by the principal as deserving recognition among the best in the world; the provision of complete new buildings for St. Columba's College (Hazaribagh, Bengal) and the Meerut, Canning and Christian Colleges in the United Provinces; considerable extensions to the large denominational colleges of the Punjab; completion of the fine buildings and hostels of the Dacca College, the almost complete reconstruction of the Chittagong College, and the erection (with the help of a grant of Rs. 1,85,000) of new buildings for three of the privately managed colleges of Eastern Bengal and Assam; the housing of the Morris College at Nagpur in the old residency; and the commencement of the Islamia College, Peshawar. Equipment and libraries are mentioned in the appendix and the latter in chapter XXII. Great strides have been made in college accommodation; and this is by no means confined to government institutions. In laboratories particularly many of the colleges now leave little to be desired.

Summary of progress. 157. Such has been the material progress of the period—both pupils and expenditure have increased by over 56 per cent. and an altogether higher ideal has prevailed in the planning and erection of buildings. In other directions, too, there has been advance. The continuance of inspection by the universities has tended to maintain a proper level of staffing and instruction. The study of science has received increased attention in several provinces. Residential arrangements have been improved; and, partly as the result of this improvement, more of a corporate spirit is beginning to evince itself in individual institutions. The weak point in the system remains the striking inequality in the efficiency of different colleges—not so much in examination results, but in the conditions of study, residence and recreation and all those things that go to make up truly collegiate life.

Characteristics of different provinces. 158. The progress effected in each province is briefly described in appendix VIII. Local conditions have fostered varieties. Briefly, Madras and Bengal are distinguished by the large number of their colleges (each has 32). In Madras, missions are responsible for the management in nearly half the

cases. No less than 22 of these institutions are of the second grade, the number of students per college is small; and the total numbers show little tendency to increase. Bengal, with an equal number of colleges, has nearly double the number of students; the increase has been enormous; missions play a much smaller (though still considerable) part; and a number of comparatively cheaply run colleges (some originally proprietary, but all now placed under committees) are situated in Calcutta—the Metropolitan Institution, the City, Ripon, Central and Bangabasi Colleges. The United Provinces comes next in the number of the colleges, two of which, the Muir Central at Allahabad and Queen's at Benares, are government institutions, the remainder managed partly by missions (conspicuous among these being St. John's College, Agra, and the Isabella Thoburn College for women at Lucknow), more often by committees, such as the well-known college at Aligarh supported by the Muhammadan community and Canning College, Lucknow, supported by the talukdars of Oudh. College education in Bombay is concentrated. Though the number of students exceeds that in the United Provinces, there are only eleven colleges. The two government colleges—the Elphinstone at Bombay and the Deccan at Poona—are kept comparatively small. The largest college is the Fergusson College at Poona, managed by the Deccan Education Society. The two mission colleges—the Wilson and St. Xavier's—are also largely attended. The committee-managed colleges at Ahmedabad and Karachi have not proved altogether satisfactory. One has been transformed into a government institution, the other is being considerably overhauled. The Punjab has ten colleges, of which only one is managed by government. The characteristics are, first, the concentration of institutions at Lahore, where five ordinary arts colleges, one oriental and four professional colleges are all situated in close proximity to one another; second, the maintenance of large colleges by denominational bodies—the Sikhs, the Muhammadans and the Arya Samaj. In Eastern Bengal and Assam, too, there are ten colleges. With the exception of two of the government colleges, their condition was deplorable. The Dacca College is now one of the best-found institutions in India, the Chittagong and Cotton (Assam) Colleges have been raised in standard and greatly improved; and all the private colleges save one have been brought on to the aided list. This is the only province in which not a single college is managed by a mission body. In the remaining provinces, the number of colleges and students is small.

II.—College life.

159. A college is either of the first or second grade. A second grade college is affiliated to the intermediate, admits students of the age of 15 or 16 years and keeps them for two years or until they can pass their examination. Such institutions accordingly resemble schools rather than colleges. They are most numerous in Madras, where, says Sir A. Bourne, the college departments are little more than two classes attached to the school which, in that presidency, almost invariably exists alongside the college. Mr. Orange has recorded the condemnation passed on second grade colleges by the two inspection committees appointed by the Calcutta University. In 1907 there were 73 such institutions. Now there are 57. The retention of large schools as an integral part of colleges is also a questionable arrangement—sometimes, in the case of the weaker privately managed colleges, dictated by financial considerations. In some provinces it has been discouraged and the schools have been removed to a distance. The first grade college continues its teaching to the degree—a course of four years from matriculation, and sometimes on to the M.A. *First and second grade colleges.*

160. The staffing of a college is a matter of vital importance—not merely because it affects the standard of instruction, but in its influence upon college life, discipline and formation of character. The total number of teachers in colleges is 1,519. A government college ordinarily contains a few English professors in the Indian educational service. There are in all 122 principals and professors of this service. The Indian professors are graded in the provincial services, and the assistant professors and demonstrators in the subordinate services. The Indian professors are usually M.A.'s of Indian univer- *Staff.*

sities, but not a few have taken degrees at English or other European universities. Occasionally a large government college is found staffed entirely with Indians; such is the Rajshahi College in Eastern Bengal. As an example of staffing, the Presidency College, Calcutta, may be taken. It contains 25 professors, of whom nine belong to the Indian educational service, and 32 assistant professors, demonstrators, etc. In smaller colleges the English professors number only one or two and the total number of teachers is much less. Mission colleges contain on their staffs well qualified European or American teachers, generally members of the mission, but not invariably so (St. Stephen's College at Delhi may be instanced as a strongly staffed mission institution with a certain number of lay English teachers). Indian professors are also freely employed. Other privately managed colleges not infrequently maintain an English principal and perhaps a few English professors; such is the case in most of the aided colleges of the United Provinces, notably the Muhammadan Anglo-Oriental College at Aligarh, and in some of those of the Punjab. Often, however (and perhaps invariably in the Bengals), they utilise Indians solely. Here, as in the case of government colleges, the Indian professors are M.A.'s, for the most part of Indian universities, though there have been a few notable instances of Indians who have taken distinguished degrees in England entering service in these institutions. Often the pay is not sufficient to attract, as does government service, M.A.'s of the first class, or to retain the services of men who seek more lucrative employment at the bar or in other walks of life. Want of permanency in the staff is a defect in some of the privately managed colleges. Mr. de la Fosse has some interesting remarks about teachers in the United Provinces; though the difficulties there encountered are not so fully shared in all provinces, much of the passage is of general application.

"The finding of the right men in sufficient numbers is a difficult problem everywhere, but it is beset with special difficulties in the case of Indian colleges, and it is doubtful whether the colleges have always succeeded in obtaining a supply of teachers commensurate in quality and quantity with their ever-increasing requirements. The flowing tide of students, the higher conceptions of efficiency, the growing complexity of college life, the development of higher studies—all these have contributed to intensify the demand. But endowments for professorial chairs have not much appealed to wealthy Indian philanthropists as a way in which to benefit the country. The resources of the affiliated colleges have been sorely taxed to meet the cost of additions to their staff and they have sometimes fixed the salaries perilously low. There can be no doubt that efficiency is impaired when in order to make provision for the teaching of extra subjects salaries are kept down. On the salaries offered colleges are finding it increasingly difficult to retain young men of promise. It is time that some of them realised that a few subjects well taught by a capable and contented staff are preferable to several taught indifferently."

Instruction.

161. Each college is affiliated, according to the merits of its staff, in certain subjects and up to certain standards in each subject. With the quickly rising numbers of students, the different subjects and combinations of subjects offered by various colleges and the particularity shown by many matriculates in their choice, the commencement of the academical year is generally a busy period. Some students flock to the government colleges because they are better staffed. Not all can obtain admission; and these have to go on to privately managed colleges. Others prefer the private institution—often because its fees are lower. But, having taken admission, a student may find something amiss—perhaps he cannot get the precise combination of subjects that he wants; in this case he changes and seeks admission elsewhere. The classes having at length been formed, the work of instruction commences. Each professor lectures, perhaps for three hours a day. Each student attends some four lectures a day. The Calcutta University requires in each college a minimum of 140 lectures (spread over two years) on each subject offered for the intermediate (save vernacular composition), 160 for the degree, and 180 for the M.A. or M.Sc. examination. And each student must attend at least 75 per cent. of these lectures. The defects of the lecture system, which generally results in the student transcribing and conning in his leisure time the notes he has made in class, have been described in Mr. Orange's review. Other kinds of tuition are laboratory and tutorial work. In the better colleges, the former is probably as well done as in most countries. The latter is almost impossible in

enormous classes. The Calcutta University permits 150 in a class or a section of a class. It has, as a special measure, permitted some of the privately managed colleges to maintain classes each of 200 students. Mr. Orange noticed that in Bengal and at Dacca a beginning had been made with tutorial work in government colleges and trusted that future reports would give details. The increase of staff has permitted of improvement, but not of perfection. The principal of the Presidency College, Calcutta, remarks, that there is still too much lecturing work and too little work of other kinds, but that the latter is growing and consists of tutorial work, class-exercises and seminars. Mr. Prothero continues :—

"In 1908, the principal abolished the system of tutorial work which then existed, by which large classes were broken up into sections for tutorial purposes. He substituted nearly individual tuition in the case of the intermediate classes. The students were taken in couples, for half an hour at a time, once a fortnight. A system of class exercises was introduced in 1910-11 for all arts subjects in all undergraduate classes. A form of mark sheet was devised, and on this mark sheet lecturers and tutors enter marks and other notes of the work done. These mark sheets provide an approximately complete record of the work of every student. Different members of the staff are assigned as tutors to classes at each of the three stages,—intermediate, B.A., and M.A. At the intermediate stage composition and précis-writing are practised. At the B.A. stages most of the classes are too large for tutorial assistance to be given with the present available staff. At the M.A. stage, there is essay-writing and seminar work.

Seminar work is carried on in philosophy, history, and economics. The idea of the seminars is to encourage independent work by students under the guidance of the professor, and thus to lead up to original research. Each seminar has a small specialized library of its own. In philosophy tutorial assistance is very effectually given in connection with the seminar. The university inspector recommends the creation of a class of private tutors, like the 'Private Docents' of German universities, who should be remunerated by the special fees which the backward students would be required to pay."

The report from Eastern Bengal and Assam says nothing of the experiments which have been made in the Dacca College; and one could wish for fuller information on the subject in reports generally. Mr. Godley says of the Punjab :—

"In means for maintaining systematic and regular work in the colleges there has been noticeable advance during the past five years. In most of the colleges the practice of withholding promotion from students who have done poor work has been adopted; several of the colleges have begun to state definitely in their prospectus the conditions under which promotion will be given. Individual colleges are more and more adopting methods of their own for keeping the students to a high ideal of work. As a result principals and professors testify that there is a very marked improvement among the first and third year men. The group or tutorial system has been adopted in eight out of the eleven colleges under review. Four seem enthusiastic about its actual working, but there seems to be some haziness as to aim. Each college is nevertheless gradually adapting the system to its own size and needs. The Government College has been the distinct leader in this development."

The principal of the Muhammadan Anglo-Oriental College speaks of the time of the staff being much taken up with tutorial work.

On the whole, it is probable that improved regulations and generous expenditure on laboratories have greatly enhanced the efficiency of science teaching. The Calcutta University lays down the amount of practical teaching to be done and the size of the laboratories for classes of specified numbers; and the examinations include practical tests. In many colleges of the Bengals the science teaching is of a high order. The Punjab report emphasises the advance in science work, every science teaching college in the province save one having secured new laboratories during the period. The following passage from the Bombay report is worth quoting, not only as showing the improvement wrought in that presidency, but also as testimony to the deep interest taken by Lord Sydenham in matters educational and the munificence of Sir Chinubhai Madhavlal.

"The subject of teaching in science has received an enormous impetus during the quinquennium very largely owing to the great personal interest taken in the matter by His Excellency the Governor. Thanks to this, large donations have been placed at the disposal of government and a 'Royal Institute of Science' is now in course of erection on the site of what was formerly the Elphinstone College playing field. The detailed arrangements remain to be completed, but the reproach that teaching in science

on up-to-date lines is not available within the presidency will soon be done away: simultaneously with this the inauguration of the Madhavlal Science Institute at Ahmedabad will bring modern science within the reach of the inhabitants of that part of the presidency. On the completion of these institutions it will be possible to see how far there is any genuine demand for such teaching with which the industrial progress of the country must be largely bound up."

Literary subjects are more easily crammed; and examinations seldom provide for an oral test. The teaching of these subjects has improved, but has lagged behind that of science and still leaves much to be desired.

Residence of students.

162. As a condition of affiliation suitable residence must be provided for students who do not live with parents or guardians. Often, scanning the figures of a college, one fears that the term guardian is probably abused; and Mr. Prothero remarks that many so-called guardians are in no way connected with their wards and have no control over them. Nor are the other forms of accommodation—hostels, messes and licensed lodgings—always satisfactory or sufficient. In the United Provinces indeed, as a reference to appendix VIII will show, several colleges have practically adopted the residential system (the Aligarh College in particular having 531 of its 610 students in hostels); and so much is the system appreciated as an integral part of collegiate education that it is not uncommon for a parent to send his son to a hostel instead of letting him live with him in the town. The increase of students resident in hostels is also matter for congratulation. It was 4,040 in 1907; now it is 8,518. That is to say, five years ago one student in every four was in a hostel and now one in every three is so accommodated; or, to be more precise, it would be preferable to say 10 in 44 and 10 in 33. The figures for the present year are given below :—

Province.	Number of college students among whom ten are residing in hostels.
Madras	55
Bombay	49
Bengal	41
United Provinces	19
Punjab	15
Burma	23
Eastern Bengal and Assam	37
Central Provinces and Berar	43
North-West Frontier Province	27
Average	33

These figures show the prevalance of the hostel system in the United Provinces and the Punjab.

Residential schemes in Bengal.

163. It is when students are collected in large cities that the problem of hostel accommodation is acute. Government provides certain hostels in Calcutta, of which the best is the Eden hostel. The Scottish Churches College, the Oxford Mission and the Church Missionary Society also maintain good hostels. But some of the private colleges had apparently done little or nothing towards the provision of such buildings at the end of the quinquennium. For the many students who are thus unprovided with proper lodgings and are left unsupervised to make their own way among the difficulties and dangers of a metropolis, the Government of Bengal initiated the Calcutta mess scheme in 1905, under which it hires houses and recovers as much of the rent as it can from the students who occupy them. In 1907-08 the whole scheme was handed over to the university with a grant of nearly Rs. 16,000 a year, of which Rs. 9,000 was to meet the estimated difference between the rents paid and the amounts recoverable, and the rest to meet the pay of superintendents and of the inspector of hostels—an officer at first appointed by government but afterwards selected by the university. In 1910 thirty houses were engaged and 931 students accommodated. The influx of students into Calcutta necessitated an increase of over Rs. 7,000 in the charge upon government. When the arrangement with the university came to an

end in 1911, government proposed that the messes should become self-supporting. But a grant of Rs. 9,000 and other charges in excess appear to be still met from provincial revenues. A similar scheme has been set on foot for Dacca, though, on account of the large hostels attached to the Dacca College and other institutions and the Oxford Mission hostel, the state of things in that city is more satisfactory. Committees have been formed, a proctor appointed and a grant of over Rs. 7,000 a year given for the hiring of better houses.

The Government of India have given grants in 1911, 1912 and 1913, amounting to about Rs. 58½ lakhs, for hostel construction in Bengal—mainly in the cities of Calcutta and Dacca. The money can be used for high school as well as college hostels, and some portion may be applied to the Dacca University. How pressing is the need for these grants and for increased vigilance is shown by the following passage taken from the Calcutta University report :—

"The Calcutta colleges in spite of their best endeavours have hitherto failed to provide suitable residence for a large majority of their students and the task has naturally devolved on the university. The provincial governments have also been lending valuable help to the university in carrying out the provisions regarding the residence of students, but although the results have been on the whole beneficial, it would be idle to deny that considerable work yet remains to be accomplished. The residences now provided are in many instances so unsatisfactory, the arrangements for supervision so inadequate and the lack of intimate association between teachers and students so generally the rule, that a continuance of the present system cannot reasonably be expected to foster the conception of true academic life among students. What is imperatively needed is the development of a comprehensive scheme whereby all the affiliated colleges will in course of time be furnished with suitable residences for their students, but obviously neither the university nor the colleges with their limited resources will be in a position to undertake such a costly scheme unaided by generous contributions from the state. It is a matter for congratulation therefore that the subject has attracted the attention of His Excellency the Chancellor and that at his instance a contribution of Rs. 6,00,000 has already been made from the imperial revenue to some of the deserving colleges for hostel purposes. A further sum of Rs. 3,00,000 has also been distributed by government among certain deserving high schools in the mofussil for providing suitable residence to their students and a special non-recurring grant of Rs. 3,00,000 has been made to the university to enable it to meet the cost of construction of a hostel for its law students. It is hoped that these generous contributions from the state will be repeated and that they will be supplemented by private munificence."

164. But the mere provision of hostel buildings is totally insufficient. Supervision is a matter of vital importance. In 1906, the Government of India decided that when a substantial proportion of the students of a government college were resident in hostels adjoining or near to the college building, the principal and a professor might ordinarily be provided with free quarters on the condition that definite duties were assigned to such officers in connection with the supervision and physical welfare of the students. Provision of quarters for additional officers or the grant of allowance were also made permissible with special sanction. An enquiry was made in 1911 into the effect of these orders and it was found that arrangements had been made on these lines in 29 government colleges (including professional colleges). Some of the privately managed colleges in the United Provinces, such as the Christian, Canning and St. John's Colleges, have also made accommodation on the premises for European and Indian members of the staff. Members of Mission Societies live in their hostels—which are ordinarily for the accommodation of students of the several colleges of a town. Residential quarters near the government college and also privately managed colleges have been provided in the Punjab. In Bengal and in Eastern Bengal and Assam free quarters and allowances are given to superintendents, free medical attendance is generally afforded to the boarders and at Dacca the college has its own dispensary with an assistant surgeon whose sole duty is attendance on the hostels of the city. In this connection it may be mentioned that systematic physical examination of students has been commenced at the Forman College, Lahore, and its introduction is favoured at other Punjab colleges. *Residence of professors.*

165. In order to realise the ideal of a college, some community of life is essential between the teachers and the taught. The residential arrangements just described are a step in this direction. Here, as also in the *Community of life.*

efficiency of work and play, everything depends on the personality of the staff. Mr. Covernton says of the Rangoon College :—

"In spite of defective accommodation the tone of the Government College has been very good and the relations between the staff and the pupils are of the best. This result has been achieved to a certain extent by the personality of the principals, but more generally by the large infusion on the staff of English professors in the Indian educational service. Apart from the principal, in April 1907 there were but one permanent and one temporary professor in the Indian educational service; now there are five Indian educational service professors in addition to the principal. The supply of temporary professors from England in the room of professors absent on leave has proved a very marked improvement on the makeshift arrangements obtaining in the previous quinquennium, under which persons often incompetent or undesirable (or both) were recruited as the result of advertisement in India. It is pleasing, however, to be able to add that of late years it has been possible to increase materially the Burman element on the staff, and that a Burman M.A. has just succeeded to the professorship of Pali. Another promising indication noted by the principal in his report is that 'students are now realising the futility of learning everything off by heart.' The absence of English books in matriculation and closer acquaintance with the more recent arrivals on the staff may incline them, the principal hopes, to rely more on lectures and other modes of study and less on memorising. In athletics, especially in football and hockey, the college has attained a high standard, thanks to the English staff. Cricket and tennis are becoming increasingly popular. The principal has specially encouraged these games since he finds that through them 'sickness and slackness' are both averted."

Debating and literary societies and playing fields form a favourable ground for intercourse. Another activity is the production of college magazines—and a large college generally has its magazine. Again there are societies like the Calcutta University Institute, which is patronised by government, the Moslem Institute, both in Calcutta, and the Bihar Young Men's Institute at Bankipore. In athletics an enormous advance has been made. Mr. de la Fosse says that the descriptions of the Indian undergraduate which used to pass current, if they were ever true, are certainly so no longer. Games are played with keenness and not vicariously by picked teams only. The principal of St. John's College, Agra, says, "A most encouraging feature of the year's games has been the amount of play outside the charmed circle of the first eleven. We have always felt in this college that the mere production of a good first team by no means exhausts the objects of athletics. There is real keenness among the beginners." In the Punjab a university sports committee has done much by arranging intercollegiate matches. Mr. Wright says of the Central Provinces, "In every college the futility of turning out scholars as opposed to men is recognised, and the staffs are doing their best to produce the latter. Even in the two years that I have served in the provinces I note distinct advance in this respect. It is, for instance, a healthy sign that, in place of college students dawdling aimlessly along in the evening hand in hand, or combining a constitutional with the contents of a text-book, one sees a tired but vigorous hockey team returning from play, or has to make way for a stream of cross country runners training for an inter-collegiate event." The report from Eastern Bengal and Assam says that *lathi* and sword-play have now disappeared and the superfluous energies of the students, instead of running into forbidden channels, now find scope in European games.

Discipline.

166. Of the wave of agitation which swept over parts of India during the previous quinquennium and the earlier years of that under review, fortunately less is heard in the present reports. The report from the Calcutta University contains the following passage :—

"In the course of the survey of the condition of the schools and colleges the question of discipline among students engaged the earnest attention of the syndicate. Indian students are rarely guilty of disorder, but the unfortunate political agitation which was so widely prevalent in these parts of the country a few years ago, and with which our students were beguiled to associate themselves by designing men, succeeded in swerving a considerable portion of them from their habitual path of order and discipline. The growth of a tendency to commit breaches of discipline and to indulge in disrespect and defiance of authority was painfully manifest among college and school students and the situation seemed to be fraught with extreme danger to the cause of education and discipline. The university felt it to be its paramount duty to interfere and to afford adequate protection to the innocent and guileless and to save them, if necessary, even at the verge of ruin. It was thought that a systematic extension of the residential system would arrest the evil and would eventually succeed in eradicating it. But the

question of funds was a serious obstacle in the way. The syndicate were convinced that without a liberal grant-in-aid from the state, continued for many years, and supplemented by private effort on an equally extensive scale, it was impossible to provide colleges and schools with adequate and well managed places of residence for students. The other remedy that suggested itself to the syndicate was to seek the help and co-operation of the school and college authorities in checking the growth of this spirit of lawlessness and want of discipline among students. Circulars were accordingly issued to the heads of all affiliated colleges and recognised high schools within the jurisdiction of the university inviting their prompt and special attention to the necessity of their making the fullest use of all legitimate means within their power to prevent students under their charge from participating in, or being present at, any demonstration or political gatherings. The loyal and hearty co-operation which the syndicate received from teachers and professors in response to their appeal had been worthy of the highest commendation. In isolated instances only the syndicate had to interfere with the conduct of teachers and professors who by their actions and utterances proved themselves unworthy of the position of trust which they occupied. In these cases the syndicate had to exercise their disciplinary power over the schools and colleges concerned and the action taken by them seemed to have served as warning and to have produced a wholesome effect, for since then the syndicate have had no further occasion to deal with any serious case of breach of discipline among school boys or college students."

The trouble is not altogether at an end. The Bengal report speaks of bad examples set by teachers and the dismissal of a professor of the Hooghly College for seditious teaching. We hear of disagreeable incidents which have recently occurred at the Rajshahi College; and, so late as 1912, it was found necessary to place a government officer in control of the Ananda Mohan College, Mymensingh, in order to restore discipline, "which had been seriously impaired both by overt criminal acts on the part of the students and by other serious indications of a disorderly spirit."

167. It is not, however, so much indiscipline which is to be apprehended, as lack of discipline. The Bengal report says, "Besides political unrest, there is another agency at work which is sapping the foundation of discipline; this is the gradual reconstruction of Indian society on the basis of individualism as opposed to the joint family system. The Indian student at present appeals to the old relation between *guru* and pupil when he wants a favour from his teacher, but is not much inclined to fulfil the reciprocal obligations binding on the pupil."

The same report quotes an opinion about the Presidency College, Calcutta, "Students are not disobedient nor exactly disrespectful; but they are certainly not respectful and there is no ready conformity with rules." And again, "The prevailing belief appears to be that rules are made for the sake of admitting exceptions to them, and every individual student regards his own case as exceptional. Laws have no efficiency in a college without a sense for the spirit of law, and this is at present lacking." These are matters of character training which lie at the very root of college life, and compared with which the supply of laboratories or improved examination results sink into insignificance. In the better institutions (and they are many), well managed hostels, the influence of professors in the playing field or the club, and the growth of a collegiate spirit have wrought much advantage during the period. But when we read opinions of this nature, one of which has reference to a particularly well-found college, we perceive the amount of lee-way that has to be made up in a system where wrong ideals have survived too long, we realise the responsibility that lies upon the professor of students whose moral and religious opinions are often in a state of disintegration, and we wonder what is the case with those who frequent colleges where hostels and supervision are non-existent, where the pupil attends merely for the sake of fulfilling his attendances, and the teacher having delivered his lecture, too often betakes himself to other pursuits till the next morning's class-hour.

168. No treatment of collegiate education would be complete without an allusion to the presence of from 1,500 to 2,000 Indians in England. These are studying in institutions of various kinds—mainly universities. Some are the sons of well-to-do parents. Some have received the scholarships given by government for technical or oriental subjects, or delegated to universities,

Students' advisory committee for those studying in England.

or disbursed by private persons or societies. Some desire to carry their studies higher. Some seek a road into the Civil Service or to the Bar. The difficulties encountered by many of these on their arrival can easily be imagined, as also the influences to which those are exposed who have none to befriend them. In 1909, the Secretary of State after consultation with the Government of India established a bureau of information and a committee in London to provide information and assistance, to supply lists of suitable lodging-houses and private families, and to help students socially. The committee, presided over by Lord Ampthill, contained the Right Hon'ble Saiyid Ameer Ali, the late Sir Curzon Wyllie, Sir M. M. Bhownaggree, and three other Indians resident in England. Local committees were likewise established in India to furnish information and advice to Indians proceeding to England and to communicate on behalf of them with the Central Bureau in London, both before their departure and in case of any difficulties arising. The secretaries of these committees are generally Indians. A majority of the students take advantage of the bureau; and a considerable number of parents place their sons under the guardianship of the educational adviser in London. The headquarters of the bureau are at 21, Cromwell Road, where the Northbrook Society and the National Indian Association are also located. Here lodgings are provided for those who have just landed. The extension of the scope of operations has necessitated the enlargement of the staff. An Indian assistant has been appointed to the adviser, and local advisers at the university centres. For Burmese students there is a separate organisation called the Burma Society. In view of the large number of Indians who now complete their education at home, often in a depressing environment, the scheme is one of extreme importance.

Indian diplomas at Oxford and Cambridge.

169. English universities recognise Indian universities in various ways. The rule at Oxford has recently been changed; and it is now necessary for a member of an Indian University to have passed the B.A. or B.Sc. examination before he can be admitted to the status and privileges of an Indian junior student. At Cambridge, a student of an Indian university who has studied for at least two years at a first grade college or colleges and has passed the intermediate in the first division or the B.A. in the first or second division (in the case of the Punjab university a pass in the B.A. in any division as well as in the intermediate is obligatory), and in one or other of these examinations has passed in French, Latin, Sanskrit, Arabic or Persian, is admitted to the privileges of affiliation.

Photo.-Mechl. Dept., Thomason College, Roorkee.

BIJAPUR HIGH SCHOOL, BOMBAY PRESIDENCY.

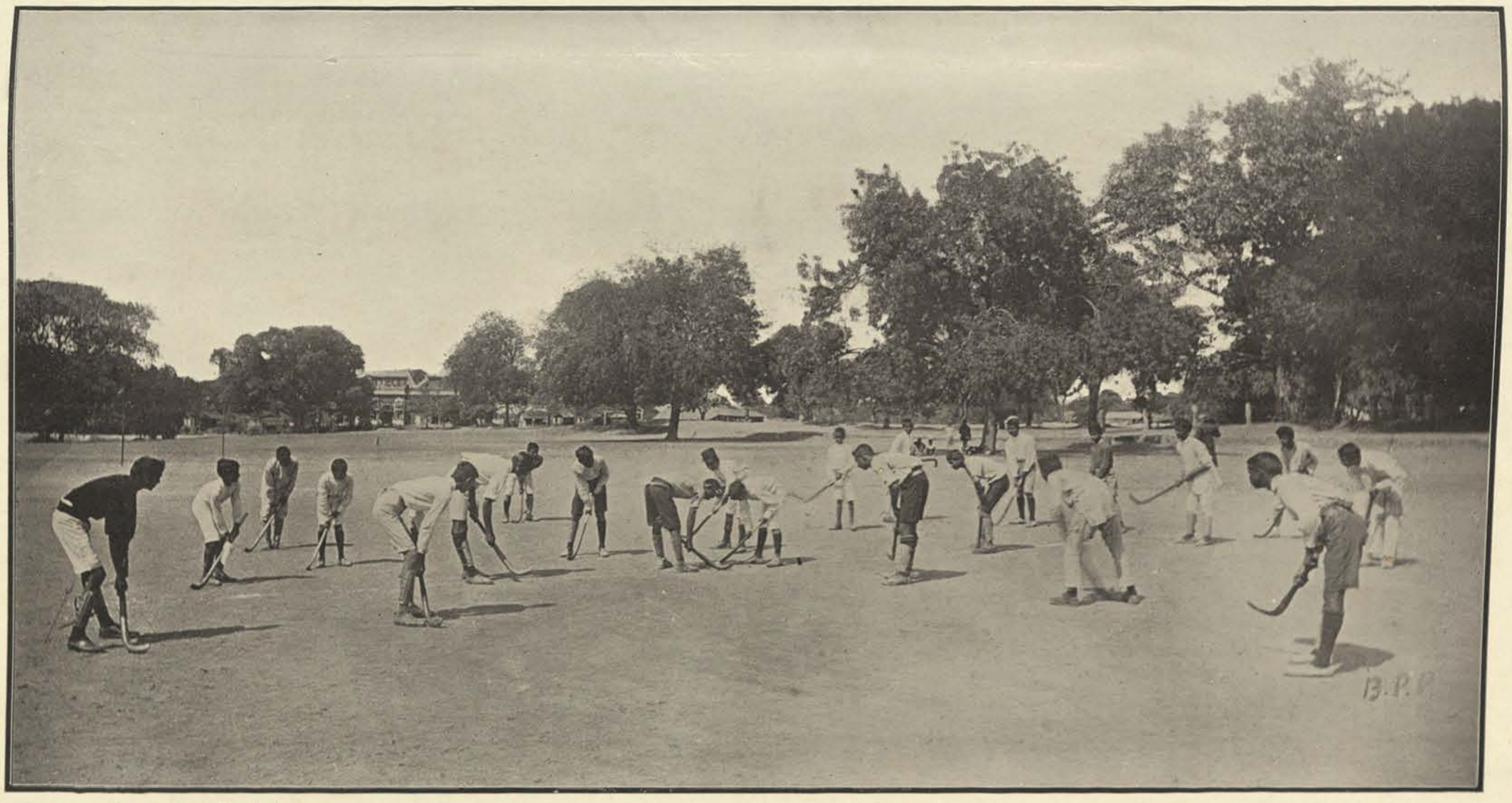


Photo.-Mechl. Dept., Thomason College, Roorkee.

BOYS AT HOCKEY, MIDDLE SCHOOL, NARSINGHPUR.

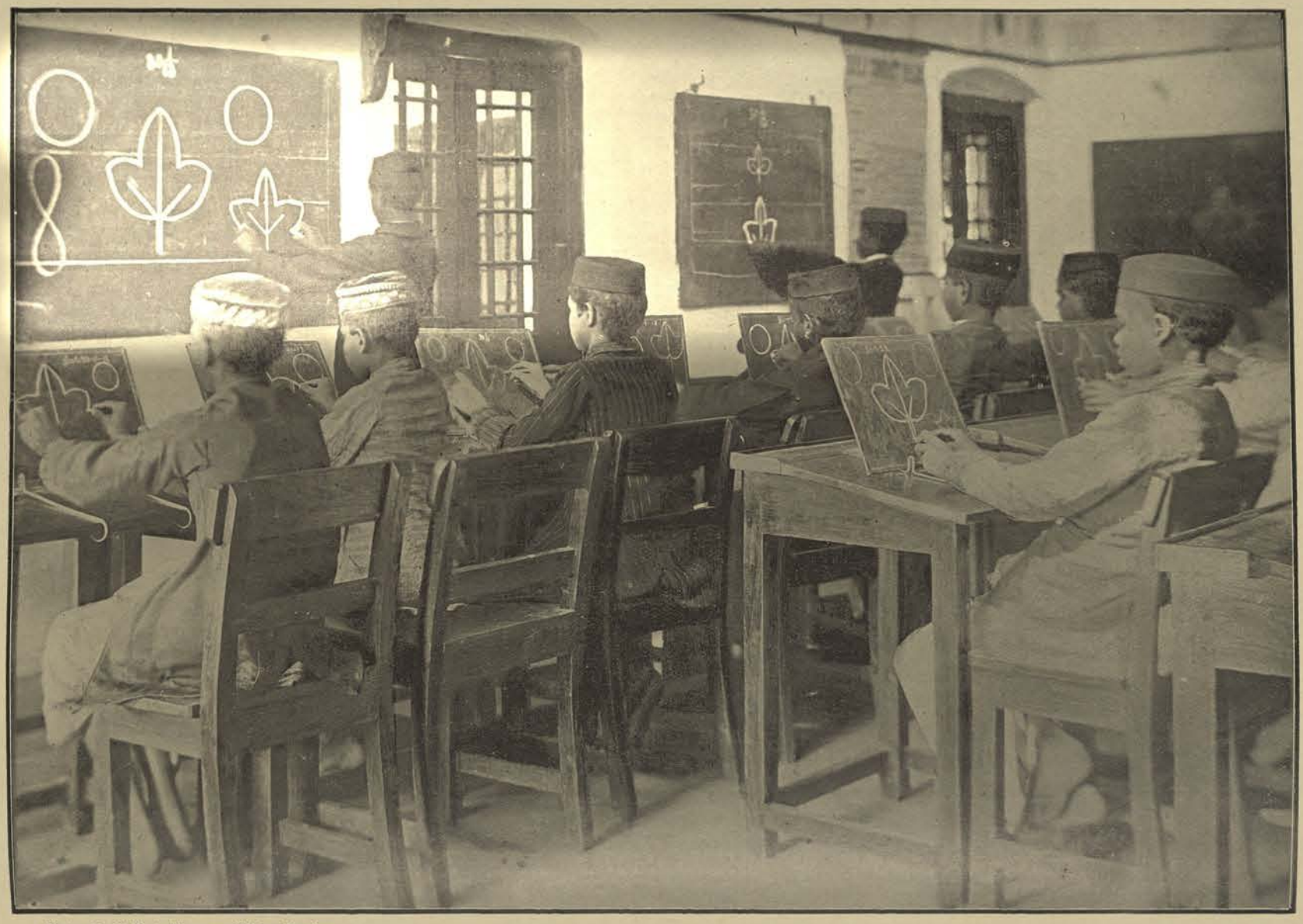
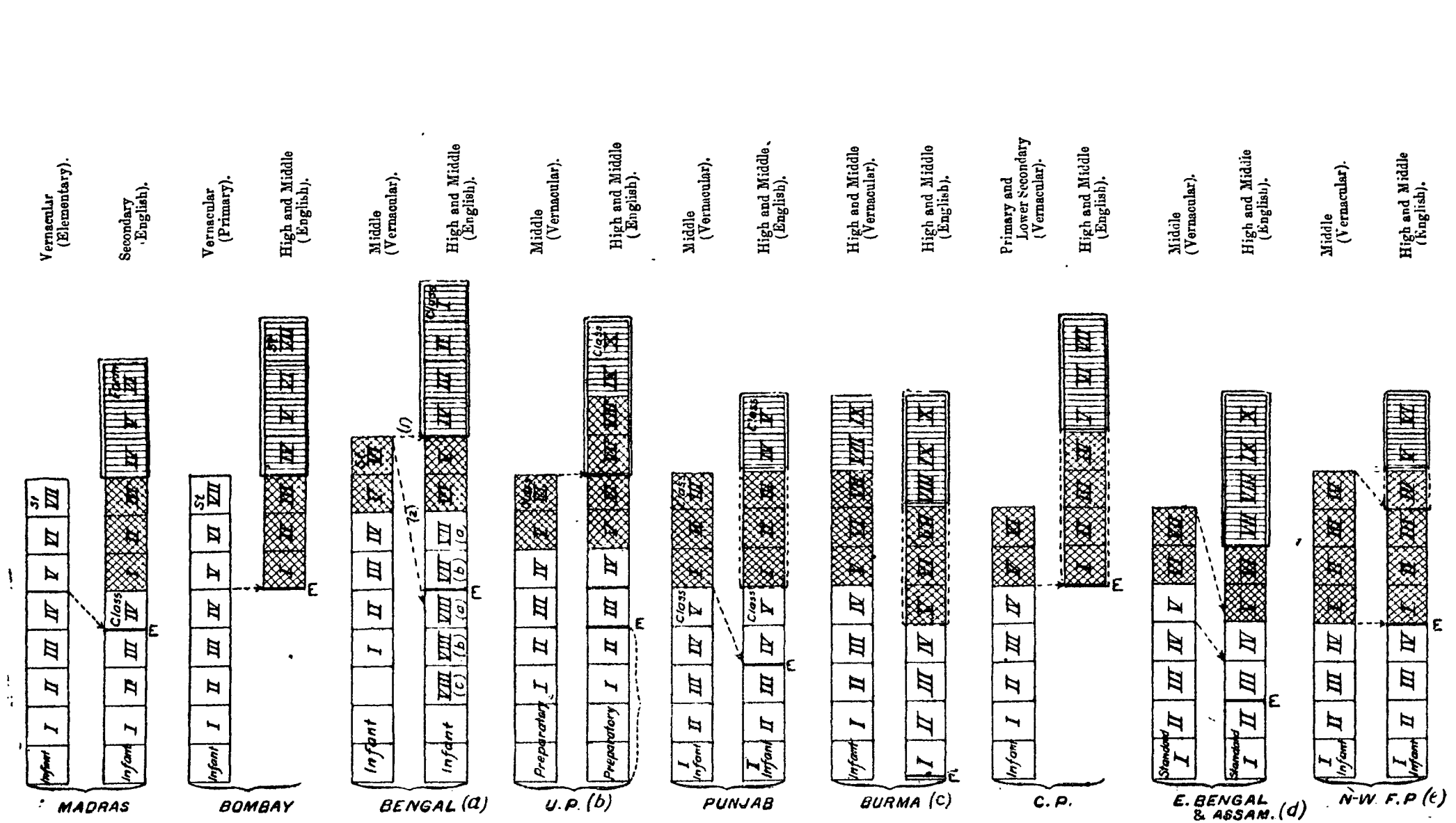


Photo.-Mechl. Dept., Thomason College, Roorkee.

AMBIDEXTEROUS DRAWING IN A MIDDLE CLASS.



(*a*) (1) For those who had read English as an optional subject. (2) For those who had not read English.

(*b*) In the U. P., the lowest four classes have been detached from government high schools and they form a distinct class of schools known as "preparatory schools."

(*c*) In Burma, the anglo-vernacular schools begin from standard I, the infant departments being abolished from 1907. English reading and writing are begun only in standard III, the English taught in standards I and II being "conversational" taught orally by the direct method.

(*d*) L. P. certificated pupils are eligible for transfer into standard IV; M. V. certificated into standard V; special coaching in English is arranged for both and half-yearly promotion is given up to standard VII in the case of latter. Standard I may be divided into two sections.

(*e*) I—IV middle and V and VI high classes of this province correspond with the V primary, I—III middle, and IV and V high classes of the Punjab schools.

SCHEME OF SCHOOL CLASSES.

CHAPTER VII.

SECONDARY EUCATION.

I.—General.

170. This chapter contains eight sections and may be divided into two parts. The first part contains a description of the organisation of secondary schools, a rapid sketch of the progress made in the past five years and a brief account of school life. The second consists of five special topics, each of which, by reason of its importance at the present juncture and at the risk of some repetition, appears to deserve separate treatment. *Treatment of the subject.*

171. Secondary education is that which follows the primary course. It is either English (more properly anglo-vernacular) or vernacular. The numbers of middle vernacular schools and their pupils are included in the figures given in the chapter on primary education. Their description is also reserved for that chapter; for, though English is sometimes taught in them, in their proper character of vernacular institutions they belong to the primary system and carry the pupil to the highest stage ordinarily attainable (save in Burma) by those who do not study English. Anglo-vernacular schools are divided into high schools, which prepare the pupil for the matriculation or some form of school-leaving examination or certificate, and middle English schools, which are merely incomplete secondary schools lacking the top classes. Two peculiar forms of school remain to be mentioned. Burma has a few vernacular high schools. Bombay has English-teaching schools, designed for members of the community who (not being Europeans) use English as their mother-tongue. Both are included in the figures of this chapter. The present chapter deals only with boys' schools. Save where otherwise specified, the figures refer to schools for Europeans as well as for Indians. *Definition.*

172. A high English school, then, aims at giving a complete preparation for employment or the university or entry upon technical studies; a middle English school carries the pupil to a stage two, three or four standards below the examination or certificate which denotes that the pupil has completed that preparation; and, if he desires to finish his secondary course, he must proceed to a high school. The organisation of a school, however, differs from province to province. The main points of contrast concern (*a*) the differentiation of the curriculum from that prescribed in a vernacular school, (*b*) the means of transfer from the one to the other, (*c*) the inclusion of elementary classes in the secondary institution, (*d*) the stage at which the study of English is commenced. As the arrangement of standards touches both anglo-vernacular and vernacular schools, the organisation of both is shown in the accompanying diagram. *Organisation.*

In *Madras* a clear distinction has now been drawn in nomenclature and curriculum between the elementary and the secondary school (see appendix X). There is no such term as middle vernacular school. A full elementary school has seven standards above the infant class and is termed a higher elementary school. Similarly, the lower secondary or middle English school is no longer recognised. Those which cannot efficiently maintain all the three highest standards have been either reduced to elementary schools or designated incomplete secondary* schools and grouped round central institutions—a scheme which has fallen short of expectations. The secondary school is supposed to be complete from the infant class to the sixth form. English is commenced in the fourth standard of the primary stage. But a pupil, after completing the fourth primary standard in an elementary school, may take transfer to the bottom of the fourth primary standard of the secondary school, thus losing only one year. The result of this change has been two-fold first, the number of incomplete secondary schools (*i.e.*, those that do not contain all the highest three forms) has been reduced to 186 and over two-thirds of the boys in secondary schools are studying in high schools; second, though the secondary

*They are classed in general table III as middle English schools, which are shown as 207 for boys—subtracting 21 schools for Europeans we arrive at the figure 186.

school pupil is expected to prosecute his studies from start to finish in a secondary school where the instruction is superior, this has not proved popular; and, by reason of the lowness of fees in elementary schools, the parent generally prefers to let his child study in a school offering a distinct curriculum and then take transfer, losing a year, to a secondary institution. *Bombay* differs from other provinces (save the Central Provinces and to some extent Burma) in that the secondary school contains no primary classes. Children are educated from the infant class to the fourth primary standard in vernacular primary schools, which are organised in the same manner and teach the same curriculum whether their pupils will proceed to an anglo-vernacular secondary school or will discontinue their studies or will finish the three remaining standards of the vernacular course. Transfer takes place direct from the top of the fourth vernacular standard to the bottom of the middle English stage, at which point the study of English commences. Another peculiarity of this presidency (already mentioned) is the existence of a class of school called English-teaching schools. There are 39 of these with 8,095 pupils. They are intended for Goanese, East Indians, etc., and are inspected by the inspector of European schools. But their figures are not included in the tables for European education. The *two Bengals*, at the commencement of the period, resembled Bombay in having a curriculum almost the same for the child under primary and middle instruction whether his education was to be of a purely vernacular type, or whether he would proceed to English classes. But they differed from Bombay and resembled Madras in including (or professing to include) primary classes in their secondary schools. (Assam had its own curriculum and organisation, which were afterwards assimilated with those of Eastern Bengal.) The only difference was that, in the anglo-vernacular secondary school, English was commenced as a second language after the child had gone through the infant classes and the first three standards of the primary stage. This arrangement, emanating from the vernacular or Froebelian scheme of 1901, did not commend itself to the Bengali parent in whom the idea is strong that the child must definitely prepare for the matriculation from his earliest days. The new scheme was accordingly ignored in all save government schools and those dependent on grants. Elsewhere English was taught from the infant classes upwards. The consequence was that the lower classes of government schools were depleted or ceased to exist, the children frequenting either inferior secondary schools where the vernacular scheme was not in force, or, if their parents decided to put up with the vernacular scheme, vernacular schools where the unwelcome instruction could be had more cheaply. This state of things was hardly desirable; and both provinces have to some extent differentiated the lower stages during the quinquennium. The details of the changes will be shown in the paragraphs which deal with courses. Meantime, it is to be observed that English has been made an optional subject in the middle vernacular course (and the report tells us, at the primary examination) in Bengal, and that a boy who has studied it there and desires transfer to a high school has the advantage of entering at the bottom of the high stage, that is, in standard IV, while his less fortunate fellow pupil, who has concentrated on the vernacular, has to enter four standards lower. In Eastern Bengal and Assam, a more pronounced differentiation of curricula was introduced, so that the middle English now differs radically from the middle vernacular school, and those in the latter who learn English have declined from 4,104 to 749. A boy who has completed the lower primary standard can come across to class IV of an English school, thus losing only one year, and receives special coaching. If he can pass an *in situ* test at the end of class VII of a vernacular school, he has to enter class V of the English school. But he does not thereby necessarily lose two years; for half-yearly promotion is permitted, special attention being given to his instruction in English. The existence of the two lowest primary standards is discouraged. The organisation in the *United Provinces* is practically identical with that which was adopted during the quinquennium in Eastern Bengal and Assam. In both provinces the vernacular and anglo-vernacular courses are distinct; the total number of standards in the latter kind of school is ten; they are divided into four primary, four middle and two high; the study of English commences after the conclusion of the second primary standard; and transfer from the vernacular middle school is allowed on similarly advantageous terms, *i.e.*, a boy may be admitted into the next highest class on the English side; and special classes may be opened in English for those who have passed the vernacular final examination. There are two differences. The vernacular middle school in the United Provinces contains six standards, that in Eastern Bengal and Assam seven. And, while the infants and two lowest standards in an anglo-vernacular school are merely discouraged in the latter province, they are relegated in the former to a separate building and separate management, since it was deemed that their presence would disturb the high classes and take up the headmaster's time, while continuous responsibility was not necessary till the study of English had been commenced. The *Punjab* differs from the United Provinces in having a shorter course; for, though the number of standards appears to be the same, it includes the infant class. The curricula vary in the schools according as they are vernacular or anglo-vernacular. In the second, English commences after the third standard. There are special classes for those who have studied in vernacular schools. A boy who has completed the primary school course can enter the lowest middle class after a year's special study. *Burma* is distinguished by having a distinct vernacular school from the lowest to the highest class—

the vernacular high school—and by permitting the commencement of English in the anglo-vernacular school at the lowest class—though in standards I and II only conversational English is permitted. Pupils who have passed standard IV or any higher standard of a vernacular school are admitted to standard IV of an anglo-vernacular school (*i.e.*, they lose at least one year). In the *Central Provinces* the primary curriculum is substantially the same in both kinds of schools, though it is simplified for rural schools. A high or a middle English school does not contain primary classes; ordinarily these are held in branch schools.

Management.

173. It has been the declared policy of government to utilise private effort to the full in the extension of secondary education. Here and there government schools are maintained or founded. But the policy has been consistently carried out. Government schools number only 271* and their pupils 74,689. In the preceding quinquennium the number of government high schools remained stationary. For, while 27 municipal schools in the Punjab were transferred to departmental management, the government schools of the United Provinces were handed over to district boards. In the period under review the number of government high schools has increased from 131 to 195.* This is mainly due to the retransfer of 46 board high schools in the United Provinces to government control; Burma and the Central Provinces (backward areas in the matter of secondary education) show respectively five and six new government schools. Eastern Bengal and Assam has an increase of five, due to the elevation of the practising school at the Training College to the high status and the temporary establishment or provincialisation of four institutions in places where the privately managed schools had either suffered withdrawal of recognition at the hands of the university or otherwise failed. The other two new schools are in Bengal and the Punjab. The change in the Punjab and the United Provinces deserves more than passing mention. Though, as Mr. Orange observed, the Education Commission of 1882 abstained from recommending the transfer of schools from the departments to municipalities, the Government of the Punjab had conceived that such a transfer would be in accordance with the spirit of their report. Similarly, by an Act of 1906, district boards in the United Provinces were made responsible for English as well as for vernacular education. In both cases the change proved unsatisfactory. Complaints were made that the Punjab municipalities took scanty interest in their new possession; nor had they sufficient funds for their proper maintenance. The Naini Tal conference of 1907 found that the change in the United Provinces was working havoc in the schools and recommended their provincialisation; it was also found that the aided schools, which looked no longer to government but to the boards for assistance, were declining in efficiency and thoroughly dissatisfied. In 1910 the board schools were retransferred to government and government again assumed responsibility for financing the aided schools. It is recorded that the province is only now beginning to recover from the setback caused by the action of 1906. The number of high schools now maintained by local bodies throughout India is only 55; these are situated mainly in Madras and the Punjab. The native States included in this report manage 37 high schools. The remaining 877 high schools are privately managed; they contain nearly three-fourths of the pupils. In the matter of middle English schools, government takes a still smaller part. It manages only 76 schools, against 303 managed by local bodies, 124 by native States, and 1,893 by private agencies. The present position is as follows :—

	Schools.	Pupils.
Managed by government . . .	271	74,689
Managed by local bodies . . .	358	65,062
Managed by native States . . .	161	17,547
Managed by private agencies . . .	2,770	496,306

Since 1907 the percentage of publicly managed schools to the total has declined from 23·1 to 22·2 per cent. Though in that year the Government of India declared the policy of establishing a government high school in each district, this has not been accomplished. There are 195 government high schools and 249 districts. A thoroughly good aided school may serve at district headquarters. And the requirements of a locality, viewed in the light of conditions and economy, are now taken as the factors determining the necessity of government effort.

* Excluding European schools but including vernacular high schools in Burma.

174. In connection with the retransfer of high schools from local bodies to government, it is apposite to quote the opinion of the Royal Commission on Decentralisation of 1908-09. "A number of witnesses held that the boards should be concerned with primary schools only, the responsibility for schools of a higher character resting with the local Government. We are of opinion that rural boards might have charge of middle vernacular as well as of primary education; provided that their duties in respect of the latter are fully discharged. We consider, however, that high schools, and all institutions in which teaching is given in English, should, in all cases, be a direct government charge." And again, as regards municipalities, "We consider that the obligatory functions of municipalities should, as suggested by several witnesses, be confined to primary instruction. Secondary education should be in the hands of government; but if a municipality is, after the due discharge of its normal duties, able and willing to devote money to middle vernacular schools, it might be permitted to do so."

Control.

175. Far the major part of secondary education is thus in the hands of private agencies, *i.e.*, mission bodies, committees and individuals. So important are this subject and the kindred subject of grants-in-aid that they deserve to be treated together as a special topic. For the present it will suffice to consider the means of control over these privately managed institutions which so largely monopolise a very vital part of the instructional system. They are controlled partly by the departments of public instruction, partly by the universities. The departments may aid schools and by this means impose their regulations upon them. They also ordinarily permit the pupils of these schools to compete for government scholarships and to admit government scholars. Two-thirds of the privately managed schools are aided. It may be presumed that the great majority possess scholarship rights, the withdrawal of which is resorted to only in cases of gross mismanagement. The universities have two great means of control. First, they recognise schools for the purposes of presenting candidates at matriculation. Second, they conduct the matriculation examinations. An exception is Madras. The Madras University has not taken the powers of recognition permitted under the Act of 1904; and the success of the school leaving certificate scheme has transferred the control of the courses and the award of diplomas almost wholly to the department or at least to the committee of officials and non-officials with whom the working of the scheme rests. A school wishing for recognition by the Allahabad University must apply through the inspector, who sends his recommendations through the director. The syndicate may accept the report or institute enquiry. In Bombay, the university may accept the departmental list of recognised schools; if a school not recognised by the department applies to the university, that body may refer to the department, and either accept its recommendation or make further enquiry. The Punjab University utilises the government list or may after enquiry recognise other schools. A school desiring recognition by the Calcutta University applies direct to the syndicate who make their enquiries either through the government inspector or through some other qualified person. The syndicate in all cases is the recognising body in the university; the government inspector is ordinarily utilised as the inspecting agency. While the power of recognition is thus in practice shared by, or largely left to, the department, the control of the matriculation rests wholly, in most provinces, with the university. Hence there is a certain duality of control. The Local Governments aid and inspect schools. The universities ultimately recognise and examine (save in Madras). It is to be remembered that in some provinces the schools are recognised and examined by a university situated outside the borders of the province. The report from the Central Provinces says, "The high school course which for every reason, educational, political and commercial, is the most important is not controlled by the administration, but is dependent on the matriculation examination as carried out by the University of Allahabad. Even the recognition and registration of schools is exercised by a university that knows nothing of them save from the insufficient data supplied on paper. This is the weak point of our secondary educational system, and until there is a separate university in these provinces, or the University of Allahabad accepts the schools recognised by the administration, and a school final or leaving certificate as equivalent to matriculation, the remedy is not obvious."

II.—Progress in the quinquennium.

176. The chief feature of the quinquennium has been the extraordinary increase in the number of pupils (see supplemental table no. 60 and following). The numbers of high schools and their pupils have increased from 1,156 to 1,210 and from 285,020 to 389,482. The answering increases in middle schools are from 2,129 schools with 188,110 pupils in 1907 to 2,464 schools with 277,586 pupils in 1912. The total increase has been from 3,285 schools and 473,130 pupils to 3,674 schools and 667,068 pupils. These figures exclude vernacular secondary schools. The increase in schools has been equivalent to 11·8 per cent., that of pupils to 41·0 per cent. The pupils in secondary English schools now form 12·7 per cent. of the male school population. The provinces of Bengal and Eastern Bengal and Assam contain no less than 1,537 of the middle English schools, and many middle vernacular schools in those provinces offer English as a subject. *Schools and pupils.*

177. But secondary schools ordinarily contain primary classes, save in Bombay and the Central Provinces. The numbers in different stages of English schools, the percentages to the total, and the percentages of increase are as follows :— *Pupils by stages.*

	1907.	1912.	Percentage to total in secondary English schools, 1912.	Percentage of increase.
Pupils in high stage .	107,607	139,315	20·8	29·5
Pupils in middle stage .	156,120	213,861	32·1	37·0
Pupils in primary stage .	209,403	313,892	47·1	49·9
TOTAL .	473,130	667,068	100·0	41·0

Since 1907, the percentages in the high and middle stages have decreased by 2 and 1 per cent. respectively; the percentage in the primary stage has increased by 3 per cent. The disproportionate increase in the lowest standards is slightly disquieting; but it is partly accounted for by the phenomenal rush into secondary education, which, in provinces where secondary schools contain all the classes, is bound to show largely in the primary grades.

178. The management of secondary English schools has already received mention. It is conveniently shown as follows :— *Schools by management.*

	Govt.	Board.	Native State.	Aided.	Unaided	TOTAL.
Secondary English schools	274	358	161	1,972	909	3,674
Pupils in secondary English schools . .	75,429	65,062	17,547	243,381	165,649	667,068

The part taken by government is very small; and 78·4 per cent. of the schools and 76·3 per cent. of the pupils are under private management.

179. The distribution by provinces is as follows :— *Distribution by provinces.*

Province.	Number of secondary English schools.	Number of pupils.	Percentage of increase in pupils during quinquennium.	Number of square miles served by a secondary English school.
Madras	375	102,886	15·1	380·0
Bombay	480	67,574	29·2	393·4
Bengal	1,194	172,577	37·0	104·3
United Provinces . . .	189	44,973	32·7	567·5
Punjab	194	70,951	53·8	501·1
Burma	113	22,320	18·1	2,042·8
Eastern Bengal and Assam .	965	163,012	82·9	115·7
Central Provinces and Berar .	146	15,835	24·9	807·8
Coorg	2	355	-17·6	791·0
North-West Frontier Province .	16	6,585	49·1	824·6
TOTAL . .	3,674	667,068	41·0	309·0

The enormous increase in pupils in Eastern Bengal and Assam and the accessibility (as compared with other areas) of secondary schools in that province and Bengal are marked features

Proportion of secondary education.

180. It is also interesting to observe the proportion of pupils in the secondary stage to the male school population and to the total male population of a school-going age.

Province.	Percentage of boys in the secondary stage of an English school to male school population.	Number of boys of a school-going age of whom one is in the secondary stage of an English school.
Madras	5·6	52
Bombay	8·0	34
Bengal	5·9	49
United Provinces	4·4	127
Punjab	8·5	59
Burma	2·3	112
Eastern Bengal and Assam	7·0	41
Central Provinces and Berar	5·6	74
Coorg	7·0	43
North-West Frontier Province	6·5	89
TOTAL	6·0	56

A high figure in the first column does not, unless accompanied by a low figure in the second column, indicate advancement in secondary education. It would rather indicate backwardness in primary education. In this connection, the following remarks from the Punjab report are of interest. "Reckoning them (*i.e.*, vernacular middle schools, in that they teach classical languages) as secondary, and excluding all primary classes, there are 32,976 boys at the secondary stage, mostly aged from 12 to 20, or 3 per thousand of the male population. In a review of the progress of secondary education in England published in the report of the Board of Education for 1908-09, it was estimated that 4 per thousand of the population were receiving education in aided secondary schools, and about 6 per thousand in secondary schools generally, so that, numerically speaking, the Punjab is not so far behind the west in this respect as might be imagined, especially in view of the fact that elementary education in England is universal and compulsory; although such a comparison would be misleading if it implied that the scope of secondary education in the two countries is identical. Of the 33,000 pupils in secondary classes, 7,265, mostly aged fifteen and upwards, are in the two high classes, so that it may be roughly calculated that ten per cent. of the total number in the five secondary classes finish the school course annually, *i.e.*, about half of those who enter on it. Only a fraction of the vernacular middle school pupils continue their studies in the high classes of anglo-vernacular schools, which partly accounts for the decrease at the top."

Pupils by creed and caste.

181. The extent to which members of different communities participate in secondary English education may be shown as follows. The first column of figures gives the totals at school, the second the number of boys of school-going age among whom ten are at school, the third the percentage of increase in the last five years. The figures are given for schools, not stages, since it may be assumed that a boy reading in the primary classes of a secondary school will proceed to the higher stages.

	Total number in secondary English schools.	Number of boys of school-going age of whom 10 are in a secondary school.	Percentage of increase in the last five years.
Europeans and domiciled community	12,710	20	18·7
Indian Christians	22,844	60	10·1
Brahmans	150,901	53	26·3
Non-Brahman Hindus	310,462	382	35·9
Muhammadans	133,025	340	88·9
Buddhists	15,180	524	23·0
Parsis	5,414	13	5·7
Others	11,522	611	474·1

The most striking fact in this table is the relative preponderance of Brahmans over all other non-European communities save Parsis. The most significant change is the enormous increase among Muhammadan pupils. The increase among ' others ' (including animists) is indicative of an awakening among the lower ranks of society. Though proportionately very large, this movement is still numerically small.

182. Direct expenditure on secondary English schools has risen from 117 lakhs to 166⅓ lakhs. The actual increase has been by 49¼ lakhs, equivalent to 42 per cent. on the expenditure of 1907, which in turn showed an increase of only 19 per cent. over that of 1902. The amounts derived from different sources are as follows :— *Expenditure.*

	Amount contributed in		Percentage to total expenditure in	
	1907. Rs.	1912. Rs.	1907.	1912.
Public funds . . .	34,52,935	45,97,848	29·5	27·6
Fees	62,17,121	93,22,588	53·1	56·1
Other private funds .	20,35,665	27,11,100	17·4	16·3
TOTAL . .	1,17,05,721	1,66,31,536	...	...

In addition, it may be mentioned that public funds contribute over four lakhs annually on scholarships in secondary schools. This is not shown in the direct expenditure. Mr. Orange's warning must be repeated that the returns of receipts from public funds are probably accurate, those of fees are less accurate but may be approximately correct, while the figures of receipts from private sources must be received with a great deal of reserve. The increases under each head are shared by every province save Coorg. In Madras, only 12·8 per cent. of the cost of secondary education is met from public funds; in Bengal and in Eastern Bengal and Assam 17·5 per cent. In the Central Provinces the proportion so met is no less than 58·7 per cent. For the whole of India, the increase in the last five years has amounted to 33 per cent. both in public expenditure and in that from private sources, and to 50 per cent. in the case of fees.

183. This large increase in the amount of fees collected, due partly to the rapid filling of schools, partly to a raising of the rates, requires special treatment. *Fees.*

184. The peculiarity of the fee rules in India is that the rate rises as the boy proceeds through the institution. He generally begins by paying eight annas or so in the lowest class of a secondary school and finally pays about Rs. 3 in the highest. It has been recognised in Madras that this method is defective and is likely to be a frequent cause of ill-advised promotions. Other characteristics of the system are that fees are generally payable monthly and that the practice of prescribing rates for privately managed schools, or even uniform rates for government schools, does not exist in some provinces. There has been a general tendency toward the enhancement of rates during the quinquennium. As any increase in the fees payable in secondary schools is liable to raise a considerable outcry among a certain class, the revision of rules has in almost all cases been made through representative committees. (a) *in government schools.*

Such a committee met in *Madras* in 1909-10. As a result of its deliberations, differential rates have been laid down for the two terms (which differ considerably in length). The new rules also move in the direction of unifying the rate throughout classes by prescribing the same terminal fee for each of the main divisions of the school. At the same time the rates have been raised so as to increase the cost of secondary education by about 22 per cent. The change is being gradually introduced. In *Bombay* the rates were raised at the end of 1911; and here also the standards are now grouped together. As there are no primary classes in secondary schools in Bombay, the rate commences comparatively high. It is Rs. 1½ a month for the three lowest standards, Rs. 2½ for the next two, and Rs. 4 for the two highest. This permits a boy to go through the whole secondary course at a cost in fees of Rs. 210 distributed over seven years. The similar action taken in the *United Provinces* is thus described in the report. " The representative committee appointed to make the enquiry could not but endorse the original diagnosis of the situation, that a higher fee was just and could readily be paid and would present no obstacle to genuine educational progress. It was found that managers welcomed the idea, and many of them had already begun to levy fees at

government rates without affecting admissions. Accordingly proposals for enhanced fees, which were far more moderate than many had suggested and accompanied by reservations in favour of backward districts and promising pupils, were framed and recommended to government. The committee's findings were all accepted, but in spite of its caution and moderation government did not wholly escape disapprobation though the resuscitated cry that it was aiming a blow at secondary education rang unmistakably hollow. The monthly scale of fees now ranges from Re. 1 to Rs. 3 instead of Re. 0-8-0 to Rs. 3. It involves an increase of Rs. 60 only on the total cost of education, or an annual average increase of Rs. 7-8-0. The new rates have not been levied *per saltum*, but are being gradually introduced by an annual increment of Re. 0-4-0 a month and the old minimum limit of fees chargeable in aided schools has not been simultaneously raised. A more modest scheme it would be difficult to imagine, and government has signified its intention of utilizing the extra income accruing from it on scholarships and special concessions to poor students." In the *Punjab* an enquiry instituted throughout the province elicited the general opinion that school managers would welcome an enhancement and that it was unlikely in any way to affect school attendance. A revised scale came into force in 1911 increasing the rates by 20 per cent. annually for two years in succession. The result is that in publicly managed schools the rate now ranges from Re. 1 in the lowest English-teaching class to Rs. 4 in the highest. This is the only province which now retains grades of fees varying with the incomes of parents. Synchronously with this change, the highest of the three grades (for incomes above Rs. 200 a month) was abolished, and the minimum income for inclusion in the second grade was raised from Rs. 100 to Rs. 150. Pupils whose parents are classed in this grade have to pay fees at double the rate noticed above. In *Burma*, where there has been no change, the minimum rate in government schools ranges from Re. 1 to Rs. 4 or Rs. 5. Some privately managed schools, however, charge an almost uniform fee throughout the school, commencing with Rs. 3 a month in the primary classes and rising to Rs. 4 in the high classes. In the *Central Provinces* the scale of fees has been raised from eight annas to Re. 1 in middle schools and from Rs. 2 to Rs. 3 in high schools; a fee of Rs. 2-8-0 being specially fixed for high schools in poorer districts. In secondary schools of the *North-West Frontier Province* pupils of the primary departments now read free. The rates have been systematised throughout the province so as to range from Re. 1 in the lowest middle class to Rs. $3\frac{1}{2}$ in the top high class, sons of agriculturists paying from ten annas to Rs. $2\frac{1}{4}$. The condition of affairs in the *two Bengals* is somewhat peculiar. There is no regular scale of fees. But in government schools the range is generally from Re. 1 to Rs. 3 and in middle schools from 4 annas to Rs. $1\frac{1}{2}$. Similarly there are no rules for fees in aided schools. But in Eastern Bengal an attempt was made to raise them in high schools from Re. 1 in the third class to Rs. $2\frac{1}{2}$ in the highest or in middle schools to Rs. $1\frac{1}{2}$, leaving the managers to fix the rates in the lower classes. The response, we are told, has been very cordial. With few exceptions these rates have been adopted and some of them have gone further and brought the maximum up to Rs. 3. In *Assam*, on the other hand, the rate is absolutely fixed both for government and for aided schools and ranges from 12 annas to Rs. 3 in a high school and from 2 annas to Re. 1 in a middle English school.

The rates now charged in different provinces are shown in appendix XI. The raising of the rates which has taken place has ordinarily been accompanied by some increase of concessions for the children of the poor. In Bombay free studentships are now allowed at the rate of 10 per cent. In the United Provinces the increase from enhanced fee rates will be utilised in founding scholarships and giving concessions to pupils, etc. The concessions made in the Punjab have also been increased. And it is noteworthy that in Bombay government has promised that the additional income obtained shall be ear-marked for the improvement of the schools.

(b) in privately managed schools.

185. The rules and changes mentioned above have reference mainly to publicly managed schools. The amount of control which Local Governments assume over the fee rates in privately managed schools differs considerably. In Madras there is no attempt to impose rates on private managers. But the grant-in-aid code declares that in calculating the grant admissible to a secondary school the expenditure incurred by the management in defraying any difference between fees calculated at standard rates and those actually collected will not be considered as necessary expenditure. The rule in Bombay is that the fee in aided schools should be at least two-thirds of that charged in government schools. With the concession now made regarding free students the limit of the free-list has been extended in aided schools to 15 per cent. In the United Provinces and the Punjab the minimum scale of fees which must be levied in aided schools is 75 per cent. of that prescribed for government schools. In Burma and the Central Provinces, fees are levied in aided institutions at the same rate as in government institutions. In the Punjab

aided secondary schools are required to charge 75 per cent. of the rates imposed in government schools. There is of course no control over privately managed schools which are unaided. The fee in these institutions is about equal to that in aided schools though it has not increased in the same proportion.

186. The result of these changes is that the annual incidence of the fee upon each pupil in a secondary school for boys is, if we exclude European schools, Rs. 14·1 as against Rs. 12·7 in 1907. The incidence in schools of different kinds is as follows:—

	1907.	1912.
Government secondary English schools . .	19·2	20·2
Board secondary English schools . . .	13·5	11·9
Aided secondary English schools . . .	11·8	13·7
Unaided secondary English schools . . .	13·0	13·5
Average . .	12·7	14·1

The highest fee incidence is that in Burma (Rs. 26·3), the lowest is that in the North-West Frontier Province (Rs. 7·3). Eastern Bengal and Assam is also remarkable by the lowness of its rate, namely, Rs. 10·7. Bengal and the Punjab vary between Rs. 12 and Rs. 13. The rate in the United Provinces is Rs. 15·5. In Madras, Coorg and Bombay it is from Rs. 17½ to just over Rs. 18. It should be added that the average annual fee of a pupil in a high school is now Rs. 18·3, while that in a middle English school is Rs. 8·3.

187. The average annual cost of maintaining a secondary English school for boys has risen from Rs. 3,563 to Rs. 4,516. The variations are considerable. The province which shows the cheapest schools is Eastern Bengal and Assam where the cost is only Rs. 2,289. Bengal presses this close with Rs. 2,977. Schools are most expensive in the United Provinces and Burma, namely, Rs. 10,244 in the former and Rs. 11,282 in the latter. It is noteworthy that the committee which met in Calcutta in 1908 considered that a privately managed school could hardly be decently maintained under Rs. 6,500 a year. The average annual cost of educating a pupil in a secondary English school for boys has risen from Rs. 25·5 to Rs. 26·3, of which Rs. 6·6 is met from public funds, Rs. 14·7 from fees and Rs. 5·0 from subscriptions, etc. Here also the cost is lowest in Eastern Bengal and Assam, namely, Rs. 15·2 against Rs. 38·6 in Bombay, Rs. 43·9 in the United Provinces and Rs. 56·8 in Burma. The variations according to the management of the school are as follows:— *Average cost of school and pupil.*

	Rs.
Average annual cost of educating a pupil in a government secondary English school	44·8
Average annual cost of educating a pupil in a board secondary English school	19·6
Average annual cost of educating a pupil in an aided secondary English school	26·4
Average annual cost of educating a pupil in an unaided secondary English school	19·4
Average for all . .	26·3

Mr. Orange had stated its low cost as one of the main features of secondary education. It was then Rs. 25·5. Though much more is now spent, the inrush of pupils keeps the average still almost as low.

188. The developments which have taken place in secondary education during the quinquennium have proceeded on a fixed plan. In October 1906, the Government of India addressed Local Governments and suggested the lines of a general policy. Most of these points, with some modifications, are restated and amplified in the resolution of the 21st February 1913. It will be convenient in the first place to consider very briefly the progress in each province along the lines indicated in the letter of October 1906 and in paragraphs 22 and 23 of the resolution—namely, as regards government schools, the establishment of these institutions in places which require them, the desirability of employing only graduates or trained teachers, the introduc- *General development.*

tion of a graded service for anglo-vernacular teachers with a minimum of Rs. 40 a month and a maximum of Rs. 400, the improvement of hostels, and the addition of modern sides, manual training and improved science teaching; as regards aided schools, the introduction of a corresponding degree of improvement, the increase of grants-in-aid, and elasticity in grant rules; and (see paragraphs 27 and 60 of the resolution) the strengthening of the superior inspecting staff, particularly for special subjects. The main points among these, as also other matters, will likewise be treated separately in greater detail as special topics.

The Government of *Madras* framed a scheme for increasing the number of government high schools from four to nineteen, appointing some of the headmasters in the Indian, others in the provincial, educational service, and fixing the pay of assistant teachers from Rs. 40 to Rs. 120. The scheme is still under consideration. Meantime, the introduction of manual training is contemplated and the appointment of two instructors in this subject has been proposed. In *Bombay* there are 20 government high schools. The pay of their headmasters has been raised to a scale of Rs. 500 at an annual cost of Rs. 16,560, and a large scheme has been approved, and partly carried out, of which principal items are the raising of the minimum pay of assistants to Rs. 40 (already carried out at a cost of Rs. 32,000 a year), the further raising of the minimum for graduates, roughly estimated at Rs. 72,000 a year, the provision of a government high school in each of two districts which previously had none, and of a fifth headmaster in the Indian educational service, the entertainment of additional teachers at a cost of Rs. 30,000 a year, increase of aid to the amount of Rs. 63,000 a year with the prospect of a still larger increase in the future, the appointment of three new inspectors (one for science and one for drawing) and the development of secondary education in Sind. The whole scheme, when fully carried out, is expected to cost over six lakhs a year, in addition to which heavy capital expenditure is to be incurred. A committee met in Calcutta in 1908 to work out schemes in accordance with the suggestions of the Government of India for *Bengal and Eastern Bengal and Assam*. By reason of the large number of schools situated in these provinces, and the deplorable condition of many of them, the sums involved, especially for placing privately managed schools upon a proper footing, were very large. This fact, combined with the inability of the Local Governments to find the money, has prevented the financing of the proposals or their approval as a whole, though considerable improvement has been effected. In the *United Provinces* a representative committee was summoned at Naini Tal, and a scheme was formulated in 1907-08 as a result of its deliberations. This scheme, as ultimately unfolded, was calculated to cost government over 10 lakhs. Much has already been carried out, including the establishment of a training college at Lucknow for under-graduates and of three new government schools, the appointment of a fourth headmaster in the Indian educational service and of four inspectors in the provincial service for oriental languages, science, and drawing and manual training, the transfer of the district high schools, which were under boards, and of the expenditure on grants-in-aid to government, and the improvement of the pay of the staff at a cost of Rs. 1,20,000. These items were carried through at the cost of provincial revenues and by resumption of grants to boards. Other large items are the improvement of science teaching at the annual cost of over two lakhs and reforms in aided schools. A number of district high schools in the *Punjab* previously managed by municipal committees had been transferred to government during the preceding quinquennium. The reorganisation of the subordinate service at an annual cost of some Rs. 91,000 and the appointment of a special instructor in drawing and manual training have been sanctioned. An exhaustive scheme for *Burma* is under consideration, and a similar scheme for the *Central Provinces* was sanctioned just after the close of the quinquennium. The latter included the establishment of government schools, though in some districts only aided schools were to be maintained, the appointment of an Indian educational service headmaster for each division, and eventually of one science inspector, the enlargement and improvement of the provincial and subordinate services at a cost of some $3\frac{3}{4}$ lakhs, and the introduction of a new grant-in-aid code and the increase of grants by about a lakh a year. The Chief Commissioner of the *North-West Frontier Province* proposed, just after the end of the period, the provincialisation of municipal schools (the saving to municipalities to be used for spreading primary education), the appointment of an Indian educational service headmaster for Peshawar and the increase of grants-in-aid calculated to permit each high school under private management an expenditure of at least Rs. 450 a month.

189. A further description of the condition of secondary education in each province, dealing mainly with statistical increase and building operations, will be found in appendix X. In the concluding section of this chapter certain salient features are treated. It will be convenient here to summarise the main aspects of the subject and to show the progress that has been made in the last five years. Secondary education is of prime importance. It is the pivot on which depend the progress of collegiate and technical instruction, the formation of the character of those who will exercise influence in

various walks of life, and the tone and intelligence of a small but growing middle class. Mr. Orange noticed among its leading conditions that boys leave school on attaining the age of sixteen or a standard of instruction which ordinary boys can reach by that age, and that the total expenditure averaged in 1907 only Rs. 25·5 annually for each scholar. Doubts may be entertained as to the advisability of fixing so low a limit to the school-leaving age for pupils who do much of their work in a foreign tongue.* The total expenditure has increased during the quinquennium from £780,000 to nearly £1,110,000. The contributions from public funds have increased by over £76,000. But the increase from 473,130 to 667,068 pupils still keeps down the average cost to Rs. 26·3 or about £1-15-0 a year. There are other symptoms. In some parts of India the secondary school has been almost totally uncontrolled and has lent itself to exploitation. A system of privately managed institutions has arisen, aiming to pass their pupils through an external examination rendered difficult of conduct by the mere number of candidates. Of these schools, 31·5 per cent. still receive no aid from public funds; and those that are aided receive £66 a year on the average. The condition of things is far more serious in the Bengals than elsewhere. There the number of schools is enormous (there are 1,974 schools with 297,037 pupils, being 68·5 and 58·3, respectively, of the totals for India) and a very small average grant is all that available funds can permit. Of some 88,000 pupils who appear annually to enter the secondary schools only 16,351 pass the final examination and only 2,742 graduate. In 1907 the Government of India took the question in hand and considerable progress has been made in some of the provinces. Government schools have been improved; a few English headmasters have been appointed. The pay of teachers has been raised. In the United Provinces the State has resumed the management of schools and the responsibility for grants which had been handed over to the boards, and in few provinces is secondary education now more carefully fostered, whether in government or in aided institutions—the latter receiving a grant more than three times the average for all India. Buildings and equipment have been greatly improved in several provinces; hostel provision has kept pace with rising numbers; the amount given as grant-in-aid has increased by 30·1 per cent. Fee-rates have been steadily and judiciously raised. In three provinces a rational system of school leaving certificate is now in working order. A commencement has been made with inspectors of special subjects and a modest beginning in the introduction of manual training. Above all, schemes have been prepared which will admit of the pursuance of steady programmes with the help of larger funds. In the two Bengals, owing to the large numbers to be dealt with, qualitative progress has been halting. But liberal grants, and a system of supervision exercised by an increased staff, training of teachers, and more rational methods of instruction and examination have already begun, over large areas of India, to improve the condition of secondary education.

III.—School life.

190. The school-boy who enters a secondary school may find himself in any class according to his previous attainment. If it is a high school, he will be surrounded by school fellows of widely varying ages, learning letters in the infant class or preparing, at the age of fifteen and upwards, for entrance to the final examination. If it is a collegiate school, college classes also may be housed in the same or a neighbouring building. The school itself, if a government school, is probably a masonry building, fairly commodious, situated in a compound which permits of playing fields. If it is a privately managed school, it may be as good a building as that possessed by the government institution, or, especially if it is a middle school (these exist in their hundreds in the Bengals), it may be a daub and wattle shed. If the boy's parents or relatives are living in the town, he resides with them, and goes daily to the school; or a guardian may be found—a guardian being often interpreted as anyone with whom it is convenient for him to lodge; or he may be placed in the school hostel. He attends the school some five hours a day and has pre-

General conditions.

* In Bombay the average age of matriculation is said to be 18.

paration work to do as well. His work is more or less directed towards an examination which it is the duty of the school to make him pass. The curriculum he studies and the methods employed by the teacher are described later. He has holidays in the hot weather—a month or so; a short holiday at Christmas time, and a good many religious holidays during the year. Sundays are also holidays. And in Bengal there is a long autumn holiday, the Durga Puja, which may extend to another month or six weeks. Attendance is 80 per cent. of the number enrolled, varying from 84 per cent. in government to 75 per cent. in unaided schools.

Staff.

191. The number of pupils per teacher is less than 20 as against 21 in 1902. There are altogether 43,324 teachers; and 14,473 of these are trained. The policy has been laid down that an assistant teacher in a government high school should be either trained or a graduate, that his pay should commence at Rs. 40 and that he should be capable of rising, as a headmaster, to Rs. 400. Efforts have been made in this direction during the period. The conditions of service have been improved in Bombay, the United Provinces, the Punjab, the Central Provinces and the North-West Frontier Province. But, unless a man is a graduate or trained (and there are many teachers who have only passed the intermediate or matriculation), he is likely to begin his career on lower pay than Rs. 40. If he has good qualifications or if he sticks to his work, he is placed in the subordinate service (graded usually from Rs. 50 to Rs. 250). The school also contains teachers of classical languages who are not usually graduates, but taught in the old school and often ignorant of English. There are likewise a few purely vernacular teachers. In 1907 it was laid down that a few schools in each province should possess a headmaster in the Indian educational service. This policy is being slowly but surely pursued. In aided mission schools the missionaries themselves often take part in the teaching and are able to maintain a staff on respectable pay. Elsewhere, the pay is often deplorable and the teachers of many privately managed schools constitute a discontented and ever-changing body. Especially is this so in the two Bengals. The committee which, in 1908, reported on the condition of secondary education in those provinces found that in a number of privately managed high schools no less than 1,317 teachers out of 3,228 teachers of English had not passed even the intermediate examination, while training was quite unknown. Again, out of some 4,700 teachers of English and of other subjects, in the same kind of high schools, some 4,200 were in receipt of less than Rs. 50 a month and of these again some 3,300 were in receipt of less than Rs. 30. The Calcutta University is reported to demand no more in a recognised school than that the headmaster should receive Rs. 50, the second Rs. 40 and the others Rs. 25. The case of middle schools is even more deplorable. The report from Eastern Bengal and Assam considers that some improvement has taken place when in one division the number of teachers in middle schools who have passed the intermediate has risen from 23 to 97, and of those who have passed the matriculation from 210 to 488; many English teachers have not even matriculated. With teachers of such qualification and on such salaries little can be hoped for; and it is not surprising that there are complaints as to the depreciated standard of the high school.

192. The reports state that training is having its effect. In Bombay it is considered that the general level of teaching power in government schools has been immensely raised by the institution of the Teachers' College. Burma offers reasonable pay for certificated teachers—a certificated teacher of English in an aided middle school starts on Rs. 80 a month and may rise to Rs. 140; in an aided high school he starts on Rs. 140 a month and may rise to Rs. 300, while special allowances are granted to headmasters. In Burma the cost of living is high and these rates are for trained teachers; but these figures contrast startlingly with the minimum pay prescribed in high schools by the Calcutta University. The trouble about trained teachers is that the supply is at present limited. This is shown by the general figures given in the last paragraph. Mr. de la Fosse also supplies figures for divisions of the United Provinces. In the Benares division there are 323 teachers; 30 are trained and nine are graduates; and so forth. But it is hopeful that appreciation of the trained teacher is growing. It is recorded that recently

seventeen applications were made by schools to the Allahabad Training College, the average pay offered being Rs. 82.

193. Thus the kind of instruction which the school-boy finds differs greatly in degree according to the nature of the institution which he enters. So also does the discipline to which he is subjected. There are many well ordered schools and many, too, which are conducted on *laissez faire* principles, either because the teachers have not had experience, or because they do not regard the exercise of authority as a prime part of their duties, or because restraint and punishment lead to the withdrawal of pupils and a falling-off in the fee-receipts. It must be added that the conditions of work often carried on in crowded and unsuitable rooms, and the presence of classes of very small boys, do not make the task easier. In Madras, discipline is well maintained. The introduction of the school leaving certificate has put into the hands of the headmaster the power of making remarks about character. In Bombay, government schools have improved in discipline; in private schools it is not up to the mark. " Not," says one of the inspectors, " that the boys are given to active indiscipline; there have in fact been very few instances of such a thing during the past five years. But discipline is generally lax and the boys are to a great extent left to themselves; the school has little influence over them, and is regarded simply as a place where instruction in English and other subjects required for the matriculation examination is given." This reveals a basic fact regarding much of secondary instruction as understood in India. Another important matter is the slender control which parents often exercise over their sons. One inspector complains it is the boys and not the parents who frequently choose the school they shall attend. The Bengal report says that home influence is too often actively hostile to the schoolmaster's efforts. " If a boy is punished, the parent does not wait to enquire whether the punishment has been deserved or not, but makes a complaint to the managing authority against the teacher or begins an intrigue against him by way of revenge." This want of a wholesome public opinion leads to slackness in the school. Thus, Mr. Covernton states that in Burma a fertile source of trouble is a propensity to ' crib ' in examinations, which " is too often pandered to by the laxity (to use no harsher term) of individual teachers." Mr. de la Fosse speaks of the difficulty encountered in obtaining the adoption of imperative measures by the authorities of a certain school under private management which had fallen into hopeless demoralisation. The Government of India considered it desirable in 1911 to address Local Governments on the recognition by teachers of the true position of the parent. The issue of quarterly or annual reports on pupils and the holding of parents' meetings on social or ceremonial occasions show that the point is receiving attention. *Discipline.*

194. The Indian school-boy, when in normal surroundings, is easy to manage and not prone to active indiscipline. Mr. de la Fosse remarks that, though no more a paragon than the school-boy in other countries, there is no need to paint lurid pictures of him. But trouble arises when external influences play on his somewhat plastic feelings. The Burma report speaks of ' strikes ' in certain schools abetted from outside. The action of the political agitator in regard to schools has been so notorious in some provinces that but little allusion to it is required. The reports from Bengal and Eastern Bengal and Assam speak of demonstrations, picketing, the destruction of foreign goods and ' national volunteering.' Especially regrettable are those instances where teachers have propagated sedition in the schools. Such instances are mentioned in the Bengal report; and that from Bombay relates that several teachers were found to have been involved in the murder of Mr. Jackson and the attempted murder of Colonel Ferris. " The resolute attitude taken by government," writes Mr. Prior, " the disciplinary rules published by them, the suppression of pernicious schools and the wide dissemination of temperate views in the *Jagad Vritta* (a subsidised paper) have brought it about that our masters among the first have come to see that nothing but anarchy and ruin can result from the propagation of such doctrines." Elsewhere he adds that all respectable parents have now come out on the side of law and order.

195. As to moral and religious instruction, games and other such influences, sufficient has already been said in a general way. And the question of *Hostels, etc.*

hostels requires no further treatment. These are matters which vary greatly from one school to another according to its character and management. Suffice it to say that 50,481 boys of secondary schools now live in hostels as against 35,575 five years ago. Owing, however, to the great increase of pupils, the percentage of those so housed has not risen. It was 7·6 per cent. in both years.

Promotions.

196. The subject of final examinations in the secondary course is so important that a separate section is devoted to it. Class promotions are generally made by the teaching staff. Here, again, the staff of the weaker schools must often seek to please. Sir A. Bourne mentions common complaints of the laxity of headmasters in making promotions and of their accessibility to parental pleas for mercy. Nor are the teachers always to blame. "School managers too often interfere in promotions; in this as in other matters they shrink from entrusting the school staff with responsibilities that legitimately belong to it with the result that headmasters are far from having in purely school matters that position of freedom from outside control that experience proves is the best guarantee of efficiency."

Examinations and scholarships.

197. Formal examinations, save for the final (be it matriculation or some other kind), have been abolished. In some quarters this is bewailed as a cause of deterioration. Mr. Godley says that the abolition of the anglo-vernacular middle school examination "has not been an unmixed benefit, since its discontinuance removed a useful check on indiscriminate promotion, and is considered to have thereby lowered the standard of instruction in the high classes; frequent requests are consequently made for its revival. Instances have been reported in which promotions were not merely given too freely, but even sold to pupils."* At the same time, a considerable body of opinion holds that, whatever new evils may have been produced by the disappearance of these tests, the general standard of instruction has improved without them. In Bengal an examination, called the primary examination, is actually retained at the close of the middle stage for those who conclude their school career at that point. Its conduct is entrusted to the school teachers and private gentlemen. The report says that the large number of candidates appearing would lead to the conjecture that it is not limited to those who are definitely ending their education; the percentage of passes is conspicuously large and an opinion is quoted that the abolition of the old middle scholarships examination in Bengal was premature and should have been deferred till schools could be entrusted with the conduct of an *in situ* test and the controlling staff had been strengthened. For scholarship purposes indeed middle examinations are still used. But these are not general examinations. In the Bengals only selected candidates are permitted to sit—ordinarily two boys nominated by each school. Junior college scholarships are awarded on the result of the matriculation or other final test. Middle scholarships carry a pupil through the high stage and are generally of Rs. 4 or Rs. 5 a month. Junior college scholarships are held for two years till a student passes the intermediate, they are ordinarily of the value of Rs. 10 to Rs. 20 a month. The total amount spent on scholarships tenable in secondary schools has risen from a little over four lakhs to Rs. 5,49,096, of which Rs. 4,38,435 are defrayed from public funds.

IV.—The grant-in-aid system.

Character of the grant-in-aid system.

198. In the case of primary schools, the grant-in-aid system has generally broken down. It was initiated and is maintained in the case of secondary education, not because its results are in any way better than those attained in government schools, but by reason of its cheapness, and the devolution of authority it permits to local endeavour, which, it was expected, would supervise these institutions. The weak point in the system is, as pointed out in the resolution, the fact that its underlying idea, the subvention of local organised effort, has not always been kept in mind. Few secondary schools are endowed, says Sir A. Bourne, and the absence of endowment makes them too dependent on their fee collections and obliges them to have in mind not so much an ideal of education as the demands of the pupils and their parents.

* The anglo-vernacular middle school examination was reinstituted in the North-West Frontier Province in 1911-12.

Again, those schools which are not on the aided list are insufficiently controlled. The control exercised by the department, says the report for Eastern Bengal and Assam, still rests on a very slender basis. The entire management of many of the schools " is in the hands of the proprietor or his agent, and the so-called committees of management exist only in name. They are not bound to conform to the rules and regulations of the department; the only hold which the department has over them is derived from the power of withdrawal, in extreme cases of mismanagement, of their right to participate in the government scholarship system, and from the exercise of its discretion in refusing to recommend to the university the continued recognition of high schools."

Description of privately managed schools.

199. Hence, while there are many excellent aided schools (especially among those managed by missions, which generally contribute some private funds and, still more important, some principles and practice of management and discipline) not a few aided and large numbers of unaided institutions are very inferior places. The instruction is not up to standard. The report from the United Provinces notices that in Rohilkhand while 18 out of 35 candidates from government schools gained scholarships, only two out of 34 were successful from schools of other kinds. In the Eastern Bengal districts, government high schools passed 80·8 per cent. of their candidates at the matriculation of 1912, aided schools 60·1 per cent. and unaided schools 59·5. The Lieutenant-Governor of the Punjab remarks on the tendency of certain private institutions to sacrifice quality to quantity; and the report from that province observes that while in publicly managed schools the cost of education per pupil has risen during the quinquennium, in aided institutions it has fallen by over Rs. 3. But the inferiority lies much more in surroundings, recreation, discipline and those other elements that go to the formation of character. The report from Eastern Bengal and Assam states that the schools which have grown up under the system of encouraging private enterprise are not such as the founders of secondary education in India ever dreamed of; the majority have sprung up indiscriminately without adequate resources, direction or control; and the following description is quoted:— " High schools probably in the whole of Eastern Bengal are generally of weak organisation, owing partly to the want of funds and partly to absence of proper departmental control. Schools were allowed to be started and recognised in large numbers, without due provision having been made for their support and efficiency. Buildings are generally bad; appliances are wanting almost everywhere. Teachers are poorly paid, and, consequently, in many cases incompetent. Continuity of work is out of the question; agreements are seldom taken; nor are the teachers willing to give them, considering the small pay they receive. There is, therefore, frequent change of teachers, to the prejudice of discipline and progress. The higher posts are generally held by candidates for the Bar, who quit their posts as soon as they pass the law examination. Apart from the question of inefficiency of staff, the schools suffer from unhealthy rivalry. The managers and the teachers alike are anxious to swell the number of their boys, and promotions and admissions are, as a matter of fact, allowed in many cases without any restrictions. Great leniency is shown in the selection of candidates for the entrance examination. The system of teaching is also defective. There are practically no trained teachers, and cram is openly encouraged." A vividly written monograph by Mr. F. W. Marrs, acting educational inspector in Sind, is given as appendix XIII. It sheds a flood of light upon secondary education as too often understood at present in India.

Rules of grant-in-aid.

200. The rules in vogue in the different provinces regarding maintenance, building and equipment grants have been summarised in appendix XII. A few words are required here about the features and working of systems of maintenance or recurring grants. In all provinces certain conditions are laid down which must be fulfilled before a school can be recognised as eligible for grant. The principles which underlie the rules aim at making the aided school efficient and at the same time insisting on a reasonable amount of self-help by way of subscriptions and fees, the fixing of the latter at a rate which will not permit of improper competition and the use of the subsidy given in the best manner. In no province does the system now depend upon results—

save to a very modified extent in Burma. The systems may be grouped into three classes according as the grant depends upon (*i*) the amount of private income, (*ii*) the class of school, the attendance, the qualifications of teachers, etc., (*iii*) the difference between the private income from other sources than grants and the amount required to place the institution on a basis of reasonable efficiency. This classification is not, of course, a perfect one; for the considerations specified under the second head more or less figure as general conditions to grant in other cases while the actual expenditure and private income must always be regarded as factors determining the limit of the aid permissible. It must also be premised that the rules deal with maxima and that a school cannot ordinarily demand the maximum grant as of right.

(*i*) To the first class belong Madras and (nominally) Bengal. In *Madras* the grant may equal the income from private sources, exclusive of fees, which do not count as private income, of such expenditure as is required to make up the fee income to what it would be at government rates and of expenditure on scholarships. This scheme has the advantage of insisting on organised local effort and proper fee-rates. In *Bengal* it is laid down that the grant may not exceed one-half of the income derived from private sources inclusive of fees, save in certain districts, where it may equal two-thirds. As a matter of fact, the income derived from private sources (and shown as spent upon the schools) is Rs. 14,01,384, and the grant from provincial, board and municipal funds is only Rs. 3,82,023. From this it is obvious that the rule is in practice ineffective, prescribing as it does a maximum which is not approached. (*ii*) The majority of provinces fall within the second class. In *Bombay*, indeed, the maxima are limited to one-half the local assets or one-third the expenditure; but the actual grant is assessed upon a general consideration of the school—its buildings and equipment, attendance of pupils, qualifications of staff, quality of education, discipline and provision for physical exercises. Recently certain concessions have been made whereby struggling or incipient schools can obtain temporary grants. In the *United Provinces* grants are given (within certain maxima) in two ways. There is a fixed grant according to the sections included in the school, *e.g.*, in the case of the high section, Rs. 750 a year. Also, a grant of Rs. 3 a year is given for every pupil in attendance in the high and middle sections. Moreover, special grants are made, divided into preliminary and additional. In the *Punjab* also the main grants are of two kinds. First, there is the block grant based on the average attendance of the past three years. The maximum rates are Rs. 2 a year for each pupil in the lower primary section, Rs. 8 in the upper primary, Rs. 16 in the middle and Rs. 24 in the high. But here the question of efficiency of pupils, as tested at the annual inspection, is taken into consideration; while those classed as generally satisfactory earn the full grant, those classed only fairly satisfactory earn 75 per cent. And, while grants at a rate below 75 per cent. may be given only when the retention of the school, as an aided institution, is in question, instances of exceptional merit may gain grants 25 per cent. in excess of the maximum. Secondly, there are staff grants, equal to one-third the salaries paid to certificated teachers and monitors under certain conditions. The report says, "With a view to offering the managing bodies of aided schools more encouragement to improve their staffs and equipment, the rates of grants to these schools were considered and revised at the close of the quinquennium. The rates of attendance grant in the lower classes were raised, and the scale was made more equitable throughout. The rate of staff grant was raised from one-fifth to one-third; contributions to provident funds were allowed to count as expenditure on tuition; and the condition limiting the maximum grant was relaxed. Under the new rules schools will be able to earn considerably higher grants than before, provided that they increase their expenditure; and they will have greater inducement to raise teachers' salaries." The rules in the *Central Provinces* are generally the same, as regards both maxima and methods of assessment, with those in Bombay. (*iii*) There are various kinds of grants in *Burma;* but the system is largely of the third class. Grants are subject to the general efficiency of the school as shown by the results of annual promotion tests (if less than one-third of the average attendance pass, the school is liable to be struck off the aided list). First, there are what may be called the special grants, salary grants equal to one-half (temporarily reduced to three-eighths) of the pay of each certificated whole-time teacher, but subject to a maximum limit of Rs. 150 a month in each case; results grants for technical subjects payable on the result of annual examinations; and extra grants earned by those who satisfy the inspector in drill and gymnastics. Secondly, there are ordinary grants calculated on the difference between the expenditure and the income as made up of fees, subscriptions, salary and certain other special grants. Finally, in the case of permanent institutions of recognised efficiency, the grants which have been earned for three years in the ways specified above may be transmuted into fixed grants tenable (subject to the continuance of efficiency) for five years. It will be observed that the appendix gives no rules of recurring aid for Eastern Bengal and Assam. In theory, the system remained as in Bengal, and the grants given under that system were continued. But in practice, cases of newly aided schools, or schools where the grant was to be enhanced, were treated differently. The maximum of about Rs. 540

a month laid down by the conference of 1908 as the minimum in the case of privately managed schools was taken as the goal, the school management was induced to raise by enhanced fees or subscriptions one-quarter of the difference between the actual cost of the school and the standard accepted, while government found the remaining three-quarters in addition to any grant previously given.

Amount of aid given.

201. The percentage of aided secondary schools to the total of privately managed secondary schools is 68·4. The average annual amount of aid given from public funds in the case of each subsidised institution is Rs. 990. In the United Provinces, the Punjab, Burma and the North-West Frontier Province, the grant averages from Rs. 2,550 to over Rs. 3,600 a year. The lowest figure is that for the two Bengals; this is explained by the large number of schools—where the high schools number 622 against 588 for the rest of India, and middle English schools number 1,537 against 927. Apart from unaided schools the percentage of cost in an aided school which is defrayed from public funds amounts to an average for all India of 22·6 per cent. of the total cost. The statistics do not show the amount given towards buildings and equipment. For no object is money more urgently needed than to rescue secondary education from the backwater into which, too often, it has floated.

V.—Courses.

Kinds of courses.

202. The secondary course in India has in the past been ruled by the concluding external examination. There is a tendency on the part of the parent and of many teachers to insist that the whole course must be shaped to this end from the beginning. The universities have framed the matriculation as a test of fitness for admission to their courses. Considerations of a wider training have been limited to the primary and middle stages. After many years of experiment and comparative failure, several administrations have now succeeded in prescribing schemes of study which have wholly or partially superseded the university examinations. Thus the subject of curricula divides itself into various heads. (*i*) There are the university matriculations which still direct the course in the highest classes for the majority of pupils. (*ii*) There are also the alternative leaving tests, which are of two kinds, those which are intended as a test of general training leading on in Madras and the United Provinces to the university or to employment, and in Bombay to employment but not to the university; and (*iii*) those which, like the B and C finals in Bengal, are intended for special purposes. This part of the subject, so far as the questions of a modern side and of examinational methods are concerned, is more fully treated in the concluding portion of the present section. (*iv*) Finally there is the course devised by various departments for the lower classes where a strict attention to the examination goal is not required.

(i) Matriculation courses.

203. The curriculum for the high stage comprises the subjects set for the matriculation of the universities, save where these have been superseded by other tests. The general scheme of the matriculations is shown in appendix IX. Five or six subjects are required. Ordinarily history and geography and two sciences (*e.g.*, physics and chemistry or chemistry and astronomy) are grouped together as a single subject. Alternatives are always offered between any one of a list of vernacular languages and also between any one of a list of classical languages. Beyond this limited choice, the Bombay matriculation offers no alternative, but a rigid list of six compulsory subjects. On the other hand, the Punjab University offers three distinct courses—an arts, a science and an oriental matriculation, in the last of which English is now compulsory, though at the beginning of the period this was not the case. In the other three universities the subjects are partly compulsory, partly optional. Calcutta demands four compulsory and two optional subjects, Madras four compulsory and one optional, Allahabad three compulsory and two optional. The following points may be noticed as characteristics. Calcutta and Bombay insist on a classical language; also the Punjab, save in its science course. Madras insists on either a classical or a vernacular language. Allahabad offers both but insists on neither. All universities require mathematics as a compulsory subject. All similarly require history and geography, save Calcutta, which admits these two subjects as optionals. Science is compulsory at Madras and Bombay, and is an optional in other universities save Calcutta, where, however, elementary mechanics can be

offered. The science subjects are physics and chemistry; but Bombay substitutes astronomy for the former. No university demands drawing, though the Punjab and Allahabad admit it as an optional subject. None admits hygiene, even as an optional, save the Punjab. And manual training does not figure in any scheme.

(ii) School final courses.

204. The various school final examination or certificate schemes will be described later in this chapter. Something must be said here of those that have attained some measure of popularity—the Madras certificate which has practically ousted the matriculation in that presidency and neighbouring States, and the Bombay and United Provinces final examinations. The Madras scheme admits of infinite variety. There are only three subjects, called A subjects, which it is assumed all schools will take—English, vernacular composition and translation and elementary mathematics. The next, or B group, comprises subjects which it is also expected will be taught in all schools, but which are not regarded as examination subjects—geography, Indian history, science, drawing, physical training, domestic economy and needlework. The C subjects form a list of specialised optionals on which examinations are held. Obviously a course thus constructed offers great scope for originality in schools, and, since examinations play a secondary part in the earning of the certificate, a general and practical training becomes possible for the candidate. The Bombay school final course resembles the course for a matriculation in that it requires four compulsory subjects (English, arithmetic, vernacular and the history of India with general geography) and one optional. Various changes have been introduced into the examination during the period. Questions in history, geography and the classical language may be answered in the vernacular—an option which, says the report, is not likely to be often utilised so long as the matriculation dominates the high school course. A combination has been attempted of Indian and British history including a brief reference to modern conditions in England and the empire and also the British administration of India. To make room for this, the history prior to the Tudors and the Moguls is excluded from the examination, its inclusion in the course being assumed. A geography syllabus has been framed, which includes a portion of physical geography, insists less on memory map-drawing and centres on the relation of cause and effect as the really important element in this kind of teaching. Similarly in the United Provinces the school leaving certificate examination is held in four compulsory subjects, English, mathematics, the history of India (including administration) and geography, and a vernacular, and in one optional. The difference between this examination and a university matriculation is rather in method of testing than in subject matter. The effect is thus described in the report :—

> "Spoken English is decidedly better, all written work is in much better form, habits of neatness and carefulness are being formed, the year's work is better organised, and exercises are more conscientiously corrected. Generally, the work done is more systematic and intelligent. Some old bad things have been put an end to, and common-sense methods are taking their place. The schools aim at something higher and are learning to aim better. There is always a tendency in the human mind to expect too much from the invention or modification of machinery; perhaps in India there is a tendency to attach too much importance to 'schemes' as such. It is well to remember that the value of any educational scheme, especially an examination, must depend on the agency it works with and the spirit in which it is worked. In this respect the school leaving certificate has started well. A good deal of very strenuous work has gone to its initiation and development, and a high standard of examining—a matter of the highest importance—has been set up. These things are of good augury for the future and those who know the schools say that it has already begun to tell."

The examinations in Burma and the Central Provinces have appealed to but few pupils and will be noticed elsewhere.

(iii) Special final courses.

205. Part of the scheme of studies for Bengal published in 1901 was the institution of B and C final classes. They offer a differentiated course during the last two years of school life. The B classes were attached to ten high schools (seven of which were in Eastern Bengal districts) situated in places where technical institutions are also found. The literary part of the course is pursued in the high school, elementary engineering and manual training in the neighbouring technical school. The course was designed as a preparation

for technical studies, and special inducements were held out in the shape of reserved scholarships and the privilege to successful candidates of admission to the second year of the technical school sub-overseer classes. The B class final examination board sits in Calcutta and controls the examinations. The scheme has not succeeded. In 1912 only nine candidates presented themselves in Bengal, of whom seven passed. In Eastern Bengal it has proved slightly more popular; 1,195 students attended during the quinquennium and 180 passed. The report from Bengal ascribes the failure to the fact that these classes are a refuge for the destitute---unsuccessful pupils who have no idea of specialisation but merely a hope of securing some qualification which will act as a passport to government service. The Eastern Bengal and Assam report adduces another theory—the difficulty of the test as compared with the matriculation. The examination board has recently made a recommendation (which has obtained sanction) that engineering be omitted from the course, only mensuration and elementary chain surveying being retained, and that the privilege of admission to the second year of the sub-overseer classes be withdrawn. Several weighty opinions are in favour of the abolition of the classes. The C or commercial course was also introduced in ten schools. It comprised modern English, geography, practical geometry and manual training; the science subjects previously prescribed were recently changed for a study of the vernacular. The classes have been a complete failure; in 1912 only two candidates presented themselves, of whom one passed. The Eastern Bengal and Assam report observes that the course led to no recognised examination and no certain career. The suggestion may also be hazarded that the course is not sufficiently specialised to enable the candidate to secure immediate employment. The private commercial schools which teach only accounts, shorthand and typing are much more successful, but they offer no general course of instruction. Commercial and clerical classes are held in certain schools of the Punjab. The examination is conducted by the university and includes shorthand, typing, précis, book-keeping and commercial geography. There were 82 candidates in 1911, of whom 29 passed. Perhaps the more special nature of the course has saved this scheme from the fate of the C class in Bengal.

206. The prescription of the middle and lower course is in the hands of the departments. The course aims at giving a general education up to a certain stage. The most notable change chronicled in the reports is the breaking away from the Bengal vernacular scheme of 1901 in the two provinces where it formed the curriculum of high and middle schools up to the last four years. The causes of its unpopularity have already been described and the general nature of the changes made respectively in Bengal and in Eastern Bengal has been briefly indicated. The *Bengal* report describes those changes as follows :—

(iv) *The course in lower classes.*

"(*i*) English should be taught by the direct method for a longer period than formerly in all classes from VII B to V inclusive of a high school which correspond to standards III to VI of the vernacular system.

(*ii*) The time required to pass through the infant stages was reduced from three to two years.

(*iii*) Books containing easy extracts from general literature were substituted for the science readers of the vernacular system. It was considered that children of the age for whom the lower primary course was intended were 'incapable of learning science,' for generalizing from facts belongs to a later stage of mental discipline, and instruction with this aim can only be given if the power of intelligent and accurate observation has been first developed.'

(*iv*) Teachers' manuals, a junior (for the teachers of the infant sections and standards I and II) and a senior (for the teachers of the higher standards), written by authors who were considered experts in teaching the subjects about which they wrote, were prescribed.

(*v*) Separate books were prescribed for the higher standards in nature study, hygiene and geography. The first two subjects were taught in the science readers of the vernacular system. A science reader on natural phenomena was prescribed for standards III and IV, and another on animal and plant life for standards V and VI.

(*vi*) The new syllabus of studies for standards V and VI has drawn a line of demarcation between middle English and middle vernacular schools, and has prescribed separate courses for them."

The new curriculum in *Eastern Bengal and Assam* is a compromise between the scheme of 1901 and that which was in force before that year. The medium of instruction remains almost altogether the vernacular till the four top classes (*i.e.*, the high classes) are reached. But more English instruction than formerly is permitted in the lower classes. The text-books have been altered and book work reduced to a minimum by the prescription of oral teaching in such subjects as history and geography; object-lessons and drawing find prominent places; and the conversational method of teaching English has been adopted as the best method of imparting a working knowledge of a foreign language without putting an undue strain on the pupil's memory. "It is satisfactory to note," says the report, "that this curriculum has been received favourably and that even the unaided high English schools, which formerly ignored the vernacular system of education, have at least professedly adopted it." But the lack of competent teachers renders the giving of oral lessons difficult. Manuals have been produced as a temporary assistance for the teachers. These contain instructions and a certain number of model lessons on which the teacher may base his methods. But so ingrained is the habit of cram that, it is reported, the pupils (save where this is strictly forbidden) now possess themselves of the manuals intended for teachers and learn them by heart. The courses have also been recast in the Punjab and Burma. Mr. Godley says of the *Punjab*:—

"The general scheme of studies for schools in the Punjab has not been materially altered since it was introduced some twenty years ago, although the methods of teaching the various subjects have been improved. During the quinquennium ending in 1907 geometry was substituted for Euclid. Otherwise the old-established text-books remained virtually unchanged, and many of the teachers had become wedded to the idea that all the knowledge of a subject and even of a language which could fairly be expected of them was to be found within the compass of the book which they had been patiently teaching since they entered the profession. Re-arrangement of curricula, revision of syllabuses, and substitution of improved text-books seemed to be urgently required. To attempt to recast curricula wholesale without full discussion and careful elaboration would have been a rash undertaking, and the policy followed during the period under review has been to prune away acknowledged defects and to accustom the teachers to a wider choice of text-books, thus preparing the way for the introduction of courses of study arranged on sounder and more modern principles. Such courses were framed and criticised at successive conferences, with the result that by the close of the quinquennium a completely new scheme, which is now being issued, was completed. The main changes effected during the period were the abolition of text-books of translation and district geographies, the issue of new syllabuses in English and geometry, the authorisation of a large number of alternative text-books, the introduction of 'supplementary' readers for rapid reading, the extended use of the vernacular as a medium of instruction in the lower classes of anglo-vernacular middle schools, the substitution of a new history of India and other improved text-books, the discontinuance of text-books of English history in the higher classes, the extension of science teaching, and the adoption of the direct method of teaching English. All these were intended to be preliminary steps to the issue of a new scheme of studies, and although it is difficult to wean the more conservative teachers from old-fashioned methods, there are signs that progress has been made."

Burma is the only province where the study of English is permitted from the earliest class. Mr. Covernton says:—

"During the quinquennium the revised anglo-vernacular curriculum has come into general use. Its most important features are the restriction of English in standards I, II and III to what can be taught by oral methods only, English reading and writing being begun in standard IV, the abolition of an infants' standard and the addition of a third year to the high school stage, standards thus running from I to X instead of from infants to IX. Other features are the adoption of the 'new methods' in teaching English and the emphasis laid upon the extension of object-lessons and the principles underlying them. The effect of these changes has been to promote the study of the vernacular, which was often neglected previously, especially in the earlier standards; to enable children to study other subjects through the medium of the vernacular in a more thorough and intelligent fashion and to provide for a longer and deeper study of higher English and other advanced subjects than was possible when work in the high school course was compressed into two years. Indirect results have been that children have been kept longer in vernacular schools before proceeding to anglo-vernacular education and that the value of the seventh standard certificate has been depreciated by the now more obvious necessity of advancing boys to the high stage before withdrawing them from school life—the latter a specially beneficial result from an educational standpoint. At first the new curriculum met with much opposition and was frankly disapproved by many missionaries who did not appreciate the new 'direct' methods

and relied on the use of English 'readers' *ab initio* as a lure to swell the numbers in their lower primary standards. It was also disliked by not a few Burman and Chinese parents whose main desire was to have their children taught a smattering of English letters as early as possible. Later, as the system became better understood, opposition diminished. Experience, however, has shown that the fourth standard is a less convenient point at which to introduce English reading and writing than standard III, the lower of the two upper primary standards. Hence at the end of the quinquennium permission was granted to managers who so desired to begin the teaching of English reading and writing in the latter standard, at first through oral methods and the use of the black-board and later through printed books. This compromise has given general satisfaction and the practice in Burma will now be similar to that adopted in most British territories and possessions where English is not the mother-tongue. Minor changes in the way of affording more freedom in the distribution of such subjects as geography, geometry and grammar over the middle standards have also been allowed."

Manual training.

207. Owing to the literary character of the courses required for final examinations, manual training has been neglected. It has been observed that no university insists on drawing as a compulsory subject. It is included in the courses framed by the departments, but often little or nothing is done in institutions where the departments have no proper control. Other forms of manual training have been almost non-existent. But the matter is now engaging the attention of certain Local Governments. Sloyd is taught in some of the anglo-vernacular schools of Burma. Madras and the Punjab are procuring trained instructors from Europe. In the United Provinces a promising beginning has been made. "Manual training was introduced during the quinquennium and is in full swing already in a few schools. There are signs that its value is becoming more widely recognized, but until there is a sufficient supply of qualified teachers and schools can be properly equipped, it is not advisable to push the subject too vigorously just yet. The requirements of a standard equipment have been published for general information, lest managers should too lightly undertake to introduce it in their schools. Manual training at the Allahabad Training College is very popular and is producing the best results. For the way in which he has organized the work the principal, Mr. Mackenzie, deserves special commendation. The supply of competent instructors will not be long delayed, for Mr. Kempster, the principal of the Lucknow Training College, not to be outdone, is also about to open a workshop and with most praiseworthy zeal has been devoting a good deal of the leave he has recently taken to acquiring up-to-date methods of work. The few candidates who have presented themselves in this subject at the school leaving certificate examination are reported by the examiner to have acquitted themselves quite creditably."

VI.—Methods.

Defects of teaching.

208. The topic of courses leads to a consideration of the methods employed. Teaching method in India (as in some other countries too) suffers from the lack of sufficient training facilities and the tyranny of the external examination. Subsidiary causes that tell against improvement are the poor pay attaching to the post of teacher and the particularly unalluring prospects in privately managed schools, the consequent habit of regarding the profession as a stepping-stone to other things; the necessity of attracting pupils to schools that depend mainly on fees by the adoption of methods purely designed for examination results, the slender control exercised by the inspecting staff and their total exclusion from any voice in the final test. A deplorable symptom is the prolific output of 'keys.' In Eastern Bengal and Assam alone 144 keys were produced during the quinquennium. These are not limited to English works, but attempt explanations of vernacular text-books as well—generally a string of synonyms. Their number and their high price indicate their popularity. Even more deplorable is the fact that in many schools of certain provinces the teachers do not suppress the use of these works—nay, it is to be feared, even encourage them. The writer cannot refrain from a personal reminiscence—the shock he received on entering a privately managed school in Eastern Bengal to find that not only all the pupils of a certain class, but the teacher himself, were studying the daily lesson from keys to the text-book; neither teacher nor pupils had ever purchased or probably seen the

original work; it was considered sufficient if the key was memorised. This is an extreme instance. But an examination of the pupils' books generally discloses (in ill-controlled schools) almost as many keys as text-books. The patent defects are cramming, a failure on the part of the teacher to ask questions or stimulate thought, the habit of lecturing or the delivery of long notes to be learnt by heart, the treatment of subjects like history and geography as ordinary reading lessons, the attempt to impart knowledge through English before the pupils can understand that language, the neglect of practical and manual work (such as drawing) which does not tell in examinations, and too often an undesirable slovenliness in written exercises. In well managed schools (those which possess a leavening of trained teachers and where the inspector is able to exercise some influence) things are very different. The weakness of the organisation lies in the fact that the diploma gained too often has equal value whether the pupil has frequented a school where cram is rampant or one where good method and thoroughness are the order. Systems of school leaving certificates are calculated partially to remedy these defects.

Improvement in certain provinces.

209. It is a matter for congratulation that reports speak of marked improvement during the quinquennium. This has taken place (as was natural) where care has been bestowed on the training of teachers and where rational school leaving tests have been adopted. In *Madras* a solid advance is recorded. Of course results differ in different circles and schools; and the usual defects still linger. One inspector complains that history has nowhere received local treatment, no school has specialised in any short period of Indian history, in any particular feature of geography or in any one branch of science. Another says that it is insufficiently realised that English is a foreign language and must be taught as such; " reformed methods are only adopted in name and the teacher's preparation is usually inadequate." Another observes that history is still inadequately treated; teachers give notes slavishly on every point, some do not try to prevent the learning of books or notes by heart; the subject gives the teachers too many opportunities to spout and to presuppose too much knowledge in the class without troubling to elicit their ability by questioning. Another remarks that pronunciation leaves much to be desired, though attempts are being made to improve it by the use of phonetic script. But Sir A. Bourne says of Madras that the conception of the functions of an inspector has greatly developed during the quinquennium. It is now a commonplace that inspection work should be constructive, the inspectors spare no pains in improving method, and despite some inevitable disappointments it is evident that a real reform is in progress. The direct method of teaching English is now almost universally employed and with marked success. Composition is attended to and boys are encouraged to read outside their text-books—a reform to which the university has contributed by dispensing with the requirement of a detailed knowledge of prescribed works and the inclusion in the matriculation examination of composition subjects taken from those and other books. " In mathematics," he continues, " practical methods are increasingly employed and the prescription of syllabuses in which the artificial barriers raised between arithmetic, algebra and geometry are broken down, has done much to rationalize the treatment of the subject. Science teaching is probably least well done. There are some schools with well-equipped laboratories for pupils' work, but these are exceptional, and outside them it is not surprising if work in physics and chemistry is still little better than text-book study with at best a few demonstration experiments. History and geography teaching have been greatly improved. The making of relief maps and maps to show special features such as climate, distribution of population and trade routes is common. Teachers strive to represent the facts of both history and geography in their causal relations."

210. The *Bombay* report emphasises the excellent effect which the opening of the training college has had on teaching but does not give details. Mr. de la Fosse shows that improvement has taken place in the *United Provinces* in every subject. In English, " though in the inferior class of school the old weary round of reading, translation and parsing still continues as ineffectual as it is monotonous," the introduction of more intelligent methods

has worked a great change. The director cites the following passage from Mr. Bilgrami's report:—

"I would like to make mention of an interesting experiment which was carried out last year in the Anglo-Vernacular High School, Deoria. In that school class III where English is begun was divided into two sections. The one section was put in charge of a teacher who taught it by the direct method, while the other section was taught in the ordinary way to read the primer by another teacher. Six months after this experiment had been in progress I examined both sections of the class. The result was very interesting. I found that the section which had been taught by the direct method could understand simple spoken English. For example, if asked in English to get up, sit down, fetch a book or sharpen a pencil the boys would understand and obey, and they could, on their part, make up and speak similar easy sentences. They had not been taught the regular primer used in class III, yet I found that, given the primer, they could read and translate any sentence in it just as readily as the boys of the other section who had been regularly taught the primer, and they had a better pronunciation. They could also construct sentences with the words of the primer. The boys of the second section who had been taught in the usual way were up to the average of class III, so far as proficiency in the primer was concerned, but they could neither make original sentences in English nor understand English when it was spoken. The difference between the two sections was very marked. These results in the use of the direct method were obtained by a teacher who was neither trained nor in any special way qualified to apply the method, except that he had a natural aptitude for teaching. I have no doubt that a trained teacher specially versed in the direct method would have obtained even more striking results."

Of mathematics it is said, "The raising of the average standard of professional qualification and the undoubted improvement in methods, produced by the system of keeping school records and the insistence on neatness, have certainly brought about a change for the better in the higher classes." The advance in neatness appears to be due to the abolition of the 'rough' book in schools—a volume in which the pupil did all his written work in every kind of subject, and the substitution for it of separate exercise books. Another inspector speaks of the improvement in the teaching of modern geometry; he adds, "With special reference to graphs I note that in the high school scholarship examination one question is always set under this head, and, though formerly the proportion of candidates who got marks for the question was very small, this year it has risen to about 55 per cent. In the case of the school leaving certificate examination the proportion is probably very much greater."

211. Professor Ward of the Canning College, an experienced educationist, has expressed his surprise as an examiner at the strides made in the schools of the *United Provinces* in mathematics. The teaching of the classical languages is apparently impaired by the obsolete methods of the *pandits* and *maulvis* and their weak discipline. But the most unsatisfactory subject is history. The teacher is generally devoid of real historical training, and, as the medium of study is English, the lesson is apt to become a mere verbal commentary on the text-book. Mr. de la Fosse complains that although the knowledge of history required is simple enough, the school-boy, despite the multitude of keys which support the theory of propensity to cram, appears incapable of cramming historical facts which will give him an elementary groundwork. "Perhaps," he pertinently remarks, "the parrot-cry against the exercise of the memory has something to do with it. The self-appointed expert never seems to be able to steer a middle course or to carry in his mind more than one idea at a time." Geography is another 'fatal' subject; but its teaching has improved, largely, it is thought, owing to the introduction of excellent text-books in place of a syllabus which led to the use of cram-books. Here also it is observed that good teaching must include the inculcation of facts by heart. The standard of drawing, previously described as hopelessly bad, has risen steadily. Science, especially in its practical aspect, has been converted from an easy option into a subject that requires steady application but continues to attract by reason of its intrinsic interest. This is due to the erection of laboratories, and, above all, to the institution of a practical examination *in situ* for the school leaving certificate. Object-lessons, "a form of instruction to which the Indian teacher does not take kindly," are still vitiated by formalism and the weariness induced by a persistent inclination to dwell on the obvious. Efforts have not been wanting

to introduce realism. The pupil, for instance, draws in colours the animal studied and writes his observations on the opposite side of the page; while occasionally animals are introduced into the class room for study.

212. In reports from other provinces either less is said or the record is less satisfactory. The introduction of the direct method in *Bengal* has been mentioned as a part of the change in curriculum. Mr. Prothero complains of the influence of the matriculation as antagonistic to the laying of the groundwork of a good general education. "It leads to subjects which are not compulsory for that examination being excluded from those courses which should be common to all high school pupils up to at least the age of 14. In this way, owing to the vicious system encouraged in many schools of regulating the education of their pupils solely with a view to ultimate success in the matriculation examination, such subjects as drawing, history other than Indian, and geography (except for those who take it up for the matriculation) have largely fallen into neglect; while science has never been taken at all, except in the depreciated B and C classes. A similar result has followed in the two higher classes as well, from the comparative limitation of the subjects, compulsory or optional, prescribed for the matriculation, and because the inducement to take up a subject which does not pay becomes still less at this stage, both to the managers and the pupils of a school."

213. In the *Punjab* the direct method of teaching English has been successfully tried, and a monograph on the subject, by Mr. Crosse, inspector of schools, will be found as appendix XIV. Improvements are reported in the teaching of science and geography and mathematical training is given on right lines. But teaching, here as elsewhere, is prejudiced by its divorce from observation and experience. Mr. Wyatt, the inspector of Jullundur, says:—

"As the candidate is usually expected to attach dates to events or *vice versâ*, he collects them in pairs miscellaneously, ignoring historical significance or perspective, and in a similar way he gets up accounts of 'acts' attributed to various historical personages. 'Causes' he merely memorises, and an inexperienced inspector sometimes suspects him of an intelligence of which on further probing he proves himself innocent. In this division too the map in teaching history is rarely or wrongly used, and much illuminative local history is overlooked. In one town I asked the pupils of a third middle class to mention important buildings that would not have been there a century ago. It took minutes of apparently hard thinking for a single boy to suggest a single building—the dâk bungalow. The teacher of history seldom refers to the present in dealing with the past, which is neither explained, as it might be, in high, nor described, as one might expect, in middle classes. This 'unreality' in the teaching is not, of course, confined to history, which I have merely taken as an illustration. The vice is universal. In the teaching of mathematics pupils are not taught to weigh or measure, to estimate heights, distances or areas, or to deal in actual current prices. And if I ask a class how far a ship, going in turn five miles due north, due east, and due south, will be from its starting point, boys stare blankly who know all about the four sides of a square. In geography schools situated on hill-tops make no use of the advantages of their position—boys draw maps from the black-boards or the wall-map of the scene that is spread at their feet—abstractness appears to be a deliberate aim in the teaching. In science, again, the teaching is mainly of set experiments with specially purchased apparatus, performed and described by teacher and pupils. Notes are dictated, and at home a diagram is drawn showing, not the process or the principles, but the particular bit of apparatus employed. This teaching of science does not deal with universals; it discourages the pupils from applying principles or observing the experiments of nature for themselves. It is thought necessary, for instance, for pupils who live within hearing of a Persian wheel to have a special mechanism set before them costing, I am told, Rs. 3, that they may learn the lesson that water reaches its own level. Apparatus in schools is indeed both widely abused and ignored. I have just seen a district middle school in which pictures showing the process of glass-making, and another of an English threshing machine (in section), and a number of 'object-lesson' pictures dealing with natural phenomena, have been in the school, and on the walls, for years, and not one of them has been used in the teaching; and in that same school before an upper primary class I saw a teacher begin a lesson on the cow with two models of a cow and a horse quite unlike the actual animals that could be seen by any pupil any day in the village. And this is typical of what occurs even in government high schools. Much apparatus in schools weakens the teaching by accustoming teachers and taught to depend on ready-made illustrations, and to avoid observing outdoors for themselves; and much that might strengthen the teaching hangs unused on the walls. The teacher will not vary his syllabus to include it."

214. The director of the *North-West Frontier Province* has some remarks which bear in a very practical way on faults of method and are of very general application. This is the unsatisfactory distribution of work among the teachers. " The class teacher system is almost non-existent. It is impossible for a teacher to attempt any correlation between the subjects he teaches or for him to take any real personal interest in his pupils, when he takes each class for only an hour or two a day. In the high department specialisation is no doubt necessary and in the middle department special teachers may be required for science, drawing, and classical languages, but when these subjects have been eliminated, there is no reason why each class should not be assigned to a single teacher; indeed if education is not to become mere book learning, there is every reason why this system should be adopted."

VII.—School leaving examinations and certificates.

215. As long ago as 1882 the Education Commission of that year recommended a school course of a modern and practical character freed from the domination of a matriculation examination. The Indian Universities Commission of 1902 laid it down that the conduct of a school final or other school examination should be entirely outside the functions of a university, that universities would benefit if the matriculation were no longer accepted as a test for service under government and if a school final examination were substituted as qualifying for admission to professional examinations, and that it would be advantageous if the school final could be made a complete or at least a partial test of fitness to enter upon a university career. A more recent commission—the Royal Commission on University Education in London—has referred to the question as one explored by the Consultative Committee of the Board of Education and now under consideration by the Board themselves. The commissioners did not feel it within the terms of their reference to make recommendations as to the best means of attaining the ends which a growing body of opinion desires. " We are, however," runs their report, " directly concerned to see a solution of the problem reached which will ensure a proper standard of entry and which, as regards finance, will relieve the university from the necessity of depending upon the fees of its matriculation examination for the support of its own proper work. Until this necessity is removed the establishment of a school examination in the true sense will be difficult. In any circumstances the influence of the university will ultimately be paramount in regulating the standard of proficiency in special subjects to be required of students for admission to the degree courses in each faculty, but the secondary schools are similarly entitled to arrange their curricula in the interests of all classes of their pupils, and the school examinations must be based on these curricula. The central education authority, on the other hand, is concerned to see that its grants to the schools and to the universities are effectively used, and in the ultimate issue it is that authority which must provide for the co-ordination of secondary schools and universities, and must give the necessary assurance to the universities that the pupils seeking admission to their degree courses have reached the required standard of education." The commissioners concluded that as a first step in the direction indicated, the university should cease to admit pupils in schools to its own examinations, including that for matriculation, though some form of matriculation examination must be retained for those who are unable to approach the university through the normal avenue of the secondary school.* *Opinions on the matriculation as a suitable test.*

216. The earlier history of the movement is instructive. In 1888 the Government of Madras instituted an upper secondary course with modern and technical subjects, the candidates being tested by the commissioner for government examinations. In twenty years only 210 candidates had fully passed the test. A school final course and examination were introduced in Bombay in 1897. The course offered optionals, among which occur natural science, political economy, agriculture and manual training. The examination was conducted by the university, though it did not admit to university courses. It was adopted as the test for government service of certain grades and to this doubtless owes a limited popularity, 1,162 candidates having *Previous attempts.*

* Royal Commission on University Education in London; Final Report of the Commissioners. 1913, pages 41 and 42.

presented themselves for it in 1901-02. It apparently attracted youths of inferior attainment who felt they had reached the tether of their capabilities; in the year mentioned only 26 per cent. passed. In 1904, the department assumed the conduct of the examination and remodelled it. It can now be taken as a modern side test, or with a classical language, according to the optional selected. The University of Allahabad held school final examinations commencing from 1894. These latterly attracted some 400 candidates a year, since they admitted pupils (equally with the matriculation) to the university courses. Most of the students took science; the other and more practical subjects were but little taken, probably because they promised no assistance in the course for the intermediate and the degree. With the institution of the matriculation, this examination ceased. The Punjab University instituted science and clerical examinations, the former as an alternative to matriculation. The numbers that competed were very small. Finally, in 1901, the Bengal Government promulgated two modern side courses and examinations—the B course, leading to the technical schools (see paragraphs 205, 356, 413 and 446) and the C course leading to clerical and commercial employ. The former was taken by some of the comparatively few who desired a technical education and the curtailment of the sub-overseer course by a year; the latter failed because it appeared to ensure no certain career which could not be equally attained through the matriculation.

Defects of matriculations.

217. This history shows three distinct stages. The first idea was to produce a modern side course and examination which should serve as entry to immediate employment, and not necessarily to the university. The second was to frame a course with similar aims but not confined to modern side characteristics. The third phase is the recognition of defects not merely in the matter but also in the manner of examination, resulting in an attempt to substitute records and broad, practical tests for a purely written investigation of the pupil's knowledge carried out by an external authority. Provincial reports speak of the shortcomings of the matriculation. The standard is capricious. Sometimes it results in enormous numbers of failures. The syndicate of the Madras University appointed a committee in 1908 to investigate the causes of this; and their report, while attributing the result mainly to defective staffing, management and equipment, also threw considerable discredit on the examination. In some cases the standard appears to be undergoing a lowering process. The authorities of the Wilson and Dayaram Jethmal Sind Colleges in Bombay mention undue leniency and the passing of unfit candidates. The startling results in the placing of candidates in divisions at the Calcutta matriculation have already been mentioned. One of the inspectors says of them :—

"If the matriculation examination is a surer test of ability and intelligence than the old entrance examination, such an inversion of the natural order of success is inexplicable. I invite attention to this feature of the matriculation examination, for I am painfully conscious of the tendency of the quality of teaching in our high schools to deteriorate under such an unhealthy influence. The questions set at the last two examinations, in English particularly, were such as an average boy of the third class could have fairly secured pass marks in. If there were some assurance that the candidates had really intelligently gone through even a fair proportion of the formidable number of books recommended to them, the easy nature of the questions set in English would not matter, for real knowledge of English is better tested by the extent of one's reading than by the chance result of any examination, however skilfully devised. But the questions set have been such that any boy who has been properly taught up to the third class of a high English school could pass in them (of course not in the first division), without having read a single book of those recommended to him, and the result is that students in the first two classes have ceased to work hard in order to add to their knowledge of the subject."

Another inspector, in Eastern Bengal, remarks :—

"No satisfactory explanation of this unexpected phenomenon can be furnished unless the matriculation is accepted as being a much easier test than the old entrance examination, for it is impossible and absurd to argue that a large proportion of the candidates have suddenly developed higher efficiency than before. That the matriculation is a very easy test is certainly the opinion of the majority of headmasters with whom I have discussed the matter. And, except for a better knowledge of English, I regret to have to add that very few consider the candidates for the matriculation any better in general knowledge than the boys who were formerly sent up for the entrance examination."

Mr. Covernton states that boys who pass high in the matriculation fail in the high school final for Burma, which the university has grudgingly and under hard conditions recognised as the equivalent of matriculation. Mr. Wright complains of the startling variations in the matriculation results both in the Central Provinces and over the whole area of the Allahabad University. Apart from this consideration, Mr. Prothero says that the influence of the matriculation extends through too many classes of the school, that the limited number of subjects prescribed deters schools from offering a sufficient variety of courses, and that no provision is made for *vivâ voce* or conversational tests. It may be added that the external examination takes no adequate cognisance of the school record, and does not utilise the experience of the teaching or the inspecting staff. " The opinion," says Mr. Prothero, " has been steadily gaining ground that a mere school final examination affords no satisfactory solution of the problem. What is really wanted is the institution of a school leaving certificate, which will contain a record not only of one single examination, but of the whole work of a boy during at least the last three years of his school career. It is only by some such agency that the domination of a school final or of a matriculation examination over the work of our high schools can be avoided; but unfortunately it presupposes a co-operation between teachers and inspectors which is hardly possible so long as the bulk of the secondary schools in Bengal are so inefficiently staffed as they are at present."

Recent schemes of school leaving certificates.

218. This is not the place to enter into a general discussion of the merits and defects of external examinations or the extent to which their retention is necessary. The question has recently attracted much attention in England. The following is a description of the attempts made in India during the last few years to combat the practical difficulties.

(*a*) *Madras school leaving certificate.*

219. In view of the failure of the upper secondary examination in *Madras* a committee was constituted consisting of the director and four official and four non-official members to draw up a scheme which should serve as an entrance test to public service, to technical institutions and to university courses, and as evidence of the satisfactory completion of a secondary course. The committee went further than their instructions and decided that what was required was the award of a school leaving certificate giving complete information as to the character and career of the pupil without any statement of his having attained a fixed standard or passed any examination. Any pupil who had gone through the secondary course to the satisfaction of his headmaster could, under this scheme, receive a certificate the value of which for any particular purpose could be estimated by any person of the necessary competence such as an officer of government or the principal of a college. Sir A. Bourne thus describes it:—

" The list of subjects includes all those now studied in schools as well as others which it is thought ought to be provided for, and may be enlarged by any that the department may hereafter approve. The subjects are grouped in three divisions known as A, B and C. The A subjects, English, vernacular composition and translation, and elementary mathematics, will, it is assumed, not ordinarily be omitted in any school and an annual public examination is held in them. The B subjects, geography, Indian history, elementary science, drawing, physical training and, for girls, domestic economy and needlework, should similarly find a place in every school course. Experience shows, however, that the subjection of pupils to a public examination in these subjects prevents variety and originality of treatment, induces cramming and impairs their value as mental training. It is impossible to say moreover what, if any, fixed quantity of knowledge in them is necessary for entrance on any career. There is therefore no public examination in them. The C subjects are indefinitely numerous. They include all those subjects proficiency in one or more of which is plainly necessary for entering the university, a technical institution, or business, or is recognized as forming part of a good school education. Among them are the more specialized parts of elementary mathematics and science, algebra, geometry, physics, chemistry and botany: English history: classical, foreign and vernacular languages: commercial subjects, shorthand, typewriting, book-keeping, commercial arithmetic, practice: and geography, agriculture, music, needlework, dressmaking and lace-making. Since heads of colleges, officers of government and others require precise information as to the progress made by a pupil who claims to have to some extent specialized in any of these subjects a public examination is held in them.

It is to be observed that the scheme makes no subject compulsory. The department expects schools to take up the A and B subjects and a school will not be allowed

to omit any of them without good reason, but will, on the other hand, admit such reason. In schools for girls, for instance, it might be desirable to omit English or mathematics. It is also intended that each school shall take more than one of the C subjects, and it is hoped that schools will increasingly provide specialized instruction so that a bifurcation of courses resembling that of the modern and classical sides of the English public school may become common. There is ample scope, moreover, for the framing of exceptional courses for exceptional schools. The scheme can be applied for instance with no difficulty to European schools, to girls' schools, or to schools in which English is not taken.

With a view to correcting the prevalent view of school work as a mere preparation for examinations and to securing continuity of effort throughout the school course the scheme provides for the entry in the certificate of marks granted in school in all subjects taken up for not less than two terms in each of the higher forms, and this is the only evidence of a pupil's progress in the 'B' subjects. The certificates are completed by the entry of the marks obtained in the A and C subjects in the public examination for which pupils can only appear if considered fit when their certificates show attendance for a minimum number of days for a year in each of the higher forms. The certificates do not contain any statement that a pupil has or has not 'passed' the public examination. They contain entries of the average marks gained in the various subjects in the presidency and in the particular school and a comparison of the marks of any pupil with these should afford necessary information as to his proficiency."

Provision is also made for pupils who obtain certificates of a low standard to return to school for a year or more and to improve their marks in any subject they have taken or to take up new subjects.

Effects of the scheme.

220. The scheme was introduced in 1911. It proved so popular that in 1912 the entries for matriculation had fallen from 8,000 or 10,000 to 580. It has been adopted in Hyderabad, Travancore, Cochin and Mysore; and the certificate is accepted by the Madras University. The public examinations are controlled by a committee constituted precisely as was the committee which drew up the scheme. The advantages of the system are that it permits of considerable choice of subjects and variety of syllabuses, that it checks cramming and the comparative indifference of schools to moral, physical and manual training and other subjects that have no definite examination value, that it improves organisation and that it prevents frequent transfer from school to school. All the inspectors speak favourably of the way in which the system has been taken up. As to non-official opinions from educationists, the Rev. H. Schaffter of Tinnevelly describes the scheme as a blessing. "The manners and conduct and the progress of the students have greatly improved and there is less difficulty in maintaining discipline. The number on the rolls shows an increase this year. The choice of subjects given to students is an attraction causing the increase in number." The report of the Madras Christian College for 1911 contains the following passage:—

"The general effect of the changes made in the higher classes is felt throughout the school. Work is being tested without the overburdening of examinations. Boys are becoming more practically acquainted with their vernaculars. Interest in study is as marked as regularity of attendance and daily preparation. Without what is often spoken of as specialisation, courses are being more definitely fitted to suit individual capacity. The thoughts of boys are being turned away from a pass in the matriculation examination to a certificate of which they will be proud in after-days. And the wholesome recognition of the fact that a university course is not for all is giving to other lines of life the position which they ought to occupy in the minds of school-boys. An atmosphere of freedom from a too heavy course of study has pervaded the school. The feeling has been good, a healthy moral tone has prevailed, respect for discipline has been steadily maintained, and the spirit of loyalty to the school has been marked."

One passage in the report, however, demands attention. Principals can now admit to college courses those whose school leaving certificates show they are fit for it. "The immediate result of the change was the admission into the first year college class of nearly twice the number of students that has usually in any year joined it. This seemed to indicate that admissions had been made with insufficient care, and enquiry by the syndicate showed that in the case of some colleges this had been so. Measures were accordingly taken which it is anticipated will ensure better grounded and consequently less numerous admissions in future." The report of the Madras Christian College for 1912 also contains the following:—

"What was said in last year's report about the effect of the school leaving certificate —the stimulus which it has imparted and the distribution of energy in steady application

rather than its concentration to a feverish degree prior to the matriculation examination of the old days—these features remain true of 1912, but in common with many other schools we take the opportunity of voicing the request, rising in chorus from schoolmasters throughout the presidency, that the principals of colleges and those who examine these certificates when appointments depend on the result of the scrutiny, give full weight to the school record and that the public examination result on the last page be not allowed to monopolise their attention. The school record is the result of a much more prolonged and thorough examination of the pupil, and if the school work is done carefully by competent masters and headmasters the estimate should be more reliable than that of the examining board. That such a statement should seem extravagant indicates a regrettable state of affairs."

Some may think that the examinational element has been too fully eliminated.

221. In the course of framing new regulations, the University of Allahabad abolished the school final examination which (as stated above) it had held as an alternative to the entrance; both examinations were absorbed into the matriculation. In connection with the Naini Tal conference of 1907, a scheme of study was framed, the examination concluding which is conducted by the department of instruction in the *United Provinces* and accepted as qualifying for employment and by the university as admitting to its courses. It is thus described by Mr. Burrell, the first Registrar of the examination :— *(b) United Provinces school leaving certificate examination.*

"The plan of the examination consists of four compulsory subjects and eleven optional subjects, and in order to obtain a certificate candidates must pass in the four compulsory subjects, and one optional subject. The compulsory subjects are English, mathematics, the history of India with the outline of the system of administration, geography, and a vernacular. The optional subjects are (1) one of the classical languages —Sanskrit, Arabic, Persian with Arabic, and Latin, (2) commerce, (3) physics and chemistry, (4) physiography, (5) a further course in mathematics including mechanics and trigonometry, (6) botany, (7) agriculture, (8) drawing, (9) manual training, (10) a modern European language, and (11) domestic science. The courses are in principle only model courses, and schools are at liberty to propose alternative courses of equal difficulty to suit their requirements. But in practice this liberty has not been exercised and the courses drawn up by the board have, except in one instance, been universally adopted.

New important features of the examination are the following:—First, no particular text-book is prescribed for English, headmasters being allowed to use with the sanction of the department books selected by themselves. The same is the case for the vernacular. But it is the duty of the Text-Book Committee to recommend books suitable for study, and a separate list of such books is published annually for the guidance of headmasters in making their selection. Secondly, number and length of the written papers are reduced to a minimum. Thirdly, to make up for this, the written examination is supplemented by an oral test in English and a modern European language, and by practical tests in physics and chemistry, commerce, further mathematics, and manual training. In the first year there were also oral tests in classical languages and the vernacular, but they were discontinued partly because they were considered less necessary, and partly because it was difficult to make satisfactory arrangements for them. Fourthly, the records of the work done during the course of preparation by the masters and boys are inspected at the school *in situ* by the oral and practical examiners, and the headmasters' recommendations are also considered. The object is to make the examination as thorough and searching as possible and extend its influence over the regular work done in school. It will be observed that, although the co-operation of teachers is sought by taking their opinions of their pupils and the records of their work into consideration, the examination, oral and written, occupies a primary position as the criterion for determining the merits of the candidates. In introducing a scheme of this kind from elsewhere, it was necessary to adapt it carefully to different conditions and there can be no doubt that the circumstances of education in this country require that the centre of gravity shall reside in the examination.

Central Examination Board.—The conduct of the examination is entrusted to a board of ten members, presided over by the director and including two representatives of the university, one of the Thomason College, Roorkee, one of the Chamber of Commerce, two officers of the department, and two non-official members appointed by government, and the assistant director as secretary. The board meets ordinarily twice a year and brings out the examination results. Its first meeting was held in April 1908 and from that time it has been busily engaged in amending the provisional courses and building up the arrangements of the examination. Its proceedings require the confirmation of government.

The machinery of examination.—The actual arrangements for the examination, which are in the hands of the assistant director who is *ex officio* registrar, are somewhat complicated and have had to be built up slowly in the light of experience. In the

first year 1910 the written examination was held in January before the oral and practical tests, so that the examiners might look over the written papers first. It was found however that this arrangement unduly curtailed the period of preparation and would be unworkable when the numbers increased. Next year therefore the oral examination was held between December and March and the written examination postponed till February. Last year the arrangements may be said to have reached their final form. It was decided to hold the oral examination between January and March and the written examination early in April. A head examiner is appointed for each subject and he is helped by assistant examiners. In order to produce uniformity of standard, careful instructions have been drawn up for their guidance. The machinery of the examination is now complete, at least in outline, and will probably only require adjustment in detail.

Records of work.—Great importance is attached to the maintenance of records of school-work as evidence of steady and continuous preparation. One of the greatest difficulties has been to put this matter on a sound basis. The old tradition is to have two standards, a daily routine of *kutcha* and an occasional incursion into *pucca* work for the purposes of display at inspection time: and the results were inaccuracy and slovenliness. Again, the teachers had a constitutional objection to correct work, and a singular lack of judgment in assigning marks. The order of the day was to scratch along anyhow during the term and trust to cramming of the worst description just before the examination to pull the boys through. The problem was to break an old tradition and start a new one. At first the schools were left more or less at liberty to systematise their work on their own lines. But experience showed that they required more direct guidance. Certain rules and forms have therefore been prescribed by the department, requiring masters to draw up syllabuses of their work, to keep a diary of the work done in class, and to maintain a mark book showing the progress of their pupils. They are also required to exact neat and carefully written work from the boys, to correct it punctually, and preserve it for inspection."

The initiation of the scheme was attended with much difficulty and opposition. The recognition of the examination by the university led to the closing of some matriculation classes and an outcry that a blow was being aimed at higher education. To allay suspicion, matriculation classes, wherever there was a demand, were re-opened—to the detriment of school work, since provision had to be made for two separate courses. But this arrangement ceased when opposition gave way to embarrassing popularity. Recognition for the examination was sparingly granted; in 1910, eighteen schools were recognised and 325 candidates admitted; in 1911, the numbers were 39 and 946; in 1912, forty-five and 1,196. A dilemma was produced in 1909 by the issue of an order closing the lower ranks of government service to all save holders of the leaving certificate; the choice lay between recognising all schools or inflicting hardship on pupils of the less efficient. The operation of the order was postponed.

(c) Bombay school final examination.

222. The school final examination in *Bombay* is a direct descendant of that instituted in 1889. As already stated, its conduct was handed over to the department in 1904; and certain changes have been made. But it remains a written examination, with oral tests in English and the vernacular, differing from the matriculation less in its method of test than in the subjects of its course, the sole passport to government service at that stage of a candidate's career, but not recognised by the university as the equivalent of matriculation. The changes in the curriculum have already been noticed. Two remarks in the report are significant. The director is trying to arrange a scheme of science study with the university which will serve for both matriculation and school final; otherwise headmasters will have to make double arrangements if they wish to prepare boys for both. This is a warning against troubles that have been felt elsewhere and are always apt to occur with a multiplicity of tests. Again, "I think," says Mr. Prior, "the school final leaving certificate would be much more valuable if it contained a reference to the boy's conduct for the last two years and if the examiners had before them a record of his progress in each subject during that period." In 1912, 677 pupils passed this test against 2,025 who matriculated.

(d) Attempts in Burma and the Central Provinces.

223. The only province situated within the jurisdiction of the Calcutta University which has attempted to establish a general school final preparing both for employment and for the university is *Burma*. And the scheme has fared ill. Mr. Covernton writes :- -

"The introduction in 1910 of a high school final examination held by the department for anglo-vernacular high school pupils is an event of very considerable signifi-

cance. Essentially it represents an effort to break away from the literary and academic traditions of the matriculation course and to substitute a test more consonant to the needs of ordinary school education and the requirements of practical life. Candidates are required to pass in four compulsory (English, arithmetic, vernacular and geography) and two optional subjects. The optionals may be selected from a list including literary, scientific, commercial and practical subjects; oral and practical as well as written tests are required. The new examination in Burma has been severely handicapped in competition with its old-established rival, the matriculation, by the terms exacted by the Calcutta University as a condition of its recognition (a high school final candidate for entry to the university having to take not only harder but more papers than those required of a matriculate), by the requisition of a higher fee from candidates and by the unwillingness of some schools and teachers to brace themselves for the higher standard of test which it imposes. Schools and candidates moreover have been reluctant to specialize on one or other of these two examinations, and in many cases headmasters have sent in the same candidates for the two tests in one year. The net result has been, so far as subjects are concerned, to drag the high school final into the same grooves as the matriculation. On the other hand since January 1912 the high school final supersedes matriculation as a passport to government service, and negotiations have been entered into with the university to procure a modification of the terms of recognition. Confidence too is slowly growing. In March 1912, 104 candidates entered (of whom forty-seven passed) from sixteen schools, as against eighty-one entries with thirty-two passes from ten schools in March 1910. The percentage of passes compared with that of matriculation, in which in 1912, 134 candidates passed (many in class I) out of 164 entries, bears eloquent testimony to the difference of the two tests in respect of standard, testimony which is enhanced by the fact that pupils who passed high in matriculation failed in the high school final. From an educational standpoint the competition between the two examinations is most undesirable. What is now wanted is the abolition of the matriculation and the creation of a general school leaving test of an elastic character, adaptable to the requirements of employers generally, yet such as the university could accept as suitable for its own purposes."

224. The *Central Provinces* has a school final examination. It has not proved a success and is to be reconstructed. "So long," says Mr. Wright, "as our curriculum is fettered by university requirements there is no hope of an examination that depends on these, whatever title is given to it, effecting any change or development in education."

Conclusion.

225. The position may be summarised. While the inadequacy of a literary and purely external examination has long been recognised, early attempts to establish other kinds of tests were not successful—save in Bombay, where matriculation ceased to qualify for government employ. Within the last quinquennium, new systems have been framed in Madras and the United Provinces. Both lay stress on school records. The former, while it involves examination, does not make the grant of a certificate conditional on the attainment of any standard in the examination. The latter depends partially on written and oral tests. Both are recognised by the local university as an equivalent to matriculation; but the one is, while the other is not, the sole qualification for government service of certain grades. The one appears to be open to pupils of all schools; and has practically superseded the matriculation; the other is open only to those of certain recognised schools; and is making rapid headway. The only other province that has an effective system of school leaving tests is Bombay, where the scheme, though somewhat reorganised, is generally that which has been long in force. It is examinational, is not recognised by the university and is regarded as the sole qualification for government employ at that stage. The practical difficulties of working an examination over a large area with a small agency are exhibited in the United Provinces scheme, where the oral precedes the written part of the test. In Burma and the Central Provinces the schemes have been a comparative failure. Save for special examinations, such as the B and C finals in Bengal, other provinces have not attempted any scheme. The matriculation is for the most part still the goal of the high school course, though its defects are realised. "The only remedy," says the report from Eastern Bengal and Assam, "is the institution of school final examinations and the abolition of the practice of making the matriculation examination the gateway to the public services. The domination of the latter examination has exercised a most unwholesome effect on the character of the education imparted in high schools and no great improvement in their work can be expected until that domination has been removed."

13412

VIII.—Wastage in schools.

Success and failure in examinations.

226. In a notable passage of the last review Mr. Orange observed that a return of 1903 showed that more than 16,000 Indians were employed in the public service on pay exceeding Rs. 75 a month, and that the annual output of graduates had only once exceeded 2,000, many of whom entered private employ. In 1911-12 the outturn of graduates was 2,742—a large advance. But, in the past nine years, the demand has undoubtedly increased. A point for consideration is the inequality of output in different parts of India. As a result, there is a lack of qualified Indians in some provinces; and there is probably—at least in some walks of life—an excess in others. Owing, however, to the comparatively restricted production, the increased demand and the great rise in the standard of living, in no part of India can Indians be readily found to take service on terms which were accepted by men of like qualification a few years ago. "The most striking feature," said Mr. Orange, "about the numbers of graduates at the Indian universities is not the magnitude of their total or any increase in it, but the very high proportion of wastage. It takes 24,000 candidates at matriculation to secure 11,000 passes, it takes 7,000 candidates at the intermediate examination to secure 2,800 passes, and it takes 4,750 candidates for the B.A. degree to secure 1,900 passes." The disparity between candidates and passes is now less marked. At matriculation or equivalent tests 28,000 candidates produce over 16,000 passes; at the intermediate, out of 9,600 candidates, over 4,700 are successful; at the degree examination over 2,700 pass out of less than 5,000. That is to say, whereas formerly out of 100 candidates for matriculation 8 obtained the degree, now 9½ become B.A.'s or B.Sc.'s.

Continuance of pupils under instruction:

227. Some of the reports suggest that the standard of matriculation has been lowered. And it must be remembered that the school leaving certificate in Madras does not definitely depend on attaining an examination standard. Unless, however, the degree standard has also been lowered (a supposition which is not put forward in the reports—though it appears to be prophesied in the Bombay report) the figures last quoted would indicate an improvement in the candidates throughout the university career. But there are two other ways of regarding the wastage problem—the percentages of pupils in all different kinds of schools, and the percentages of those in different stages of secondary and collegiate education.

(a) from school to school.

228. As regards the first of these considerations, the following comparison between Japan and India is of interest:—

Kind of institution.	Percentage of pupils to total of pupils in	
	Japan.	India.
Universities	0·1	0·7
High schools	0·8	6·8
Middle English schools	1·7	4·9
Primary (including middle vernacular) schools	92·5	87·1
Normal schools	0·4	0·2
Special schools	0·4	0·1
Technical schools	4·1	0·2

The figures must be regarded with caution—first, because the wide extension of elementary education in Japan reduces the percentages in other kinds of institutions; second, because the middle and high school in India contains a large number of pupils in the primary stages. But these two conditions do not affect the principal point of contrast; in Japan only 2·6 per cent. of the school population proceed to a literary course, while nearly 5 per cent. proceed to technical or specialised courses; in India the answering percentages are 12·4 and 0·5. The conclusions are that the percentage of those in India who study beyond the primary stages is comparatively high, and that these seek almost exclusively a literary education and professional employment. Japan, with a population of 51,591,361 has 7,559 students in its universities and 289,902 pupils in its technical schools. British India, with a population of 255,368,553 has 36,284 students in its universities, and only 12,064 pupils in its technical schools.

(b) from stage to stage.

229. Secondly, if we regard stages, it is a most remarkable fact that out of every five pupils in India who complete the upper primary stage, no less

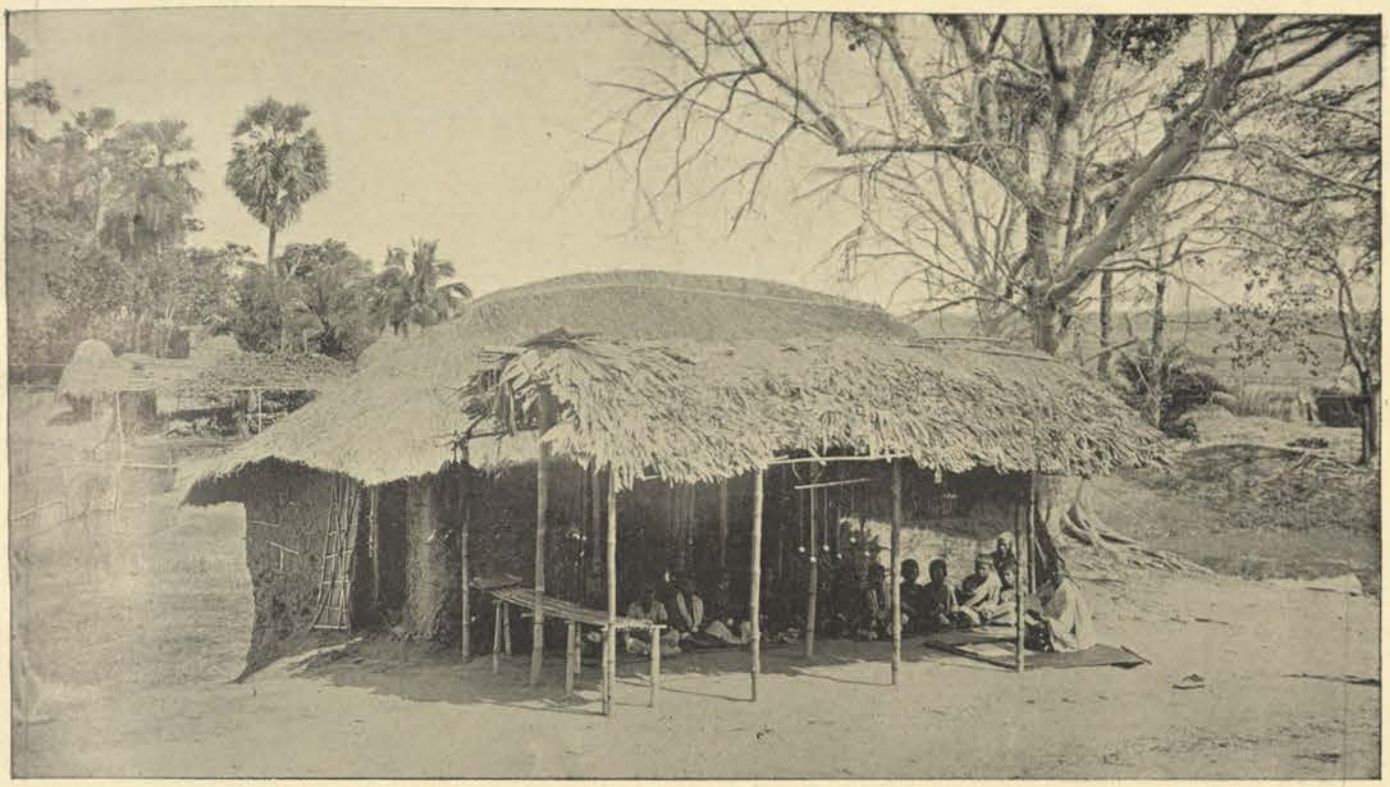
than four proceed to a secondary school. A recent report has shown that in England one pupil in twenty-two who leave a public elementary school proceeds to a public secondary school.* The comparison is defective, because in India the figures include those who read in primary stages of secondary schools and also because a vast number of pupils never rise above the lower primary stage. Nevertheless, the figures are impressive and show the ease with which, in India, the primary pupil transfers himself to higher courses. But, when we come to regard the numbers reading in secondary stages, the comparisons they offer, and the paucity of those who come through to a successful issue, the tale unfolded is very different. There are 263,346† pupils in the middle stage, 139,151 in the high. The full secondary course occupies some six years. If we divide each number by three, we find that about 88,000 is the probable number in each middle class, 46,000 in each high class. There are also 36,000 students in the universities, that is, since the college course is of four years, each class averages 9,000 students. The numbers in the lower classes in each stage sometimes (especially in the collegiate stage) exceed those in the higher. This is not always the case, however, and, as a rough calculation, we may regard the numbers just given as indicating the annual admissions to various standards. In other words, about one-tenth of those who enter a secondary school go on to college. The number of those who matriculated (or passed equivalent tests) in 1911-12 was 16,351; the number of those who graduated was 2,742. Accordingly less than one-fifth of those admitted to secondary courses passed the examination that concludes the school course, while about one in every thirty-two succeeded in obtaining a degree. Even were the examination tests of extreme difficulty, so large a wastage could not be so explained. And the figures show that the percentage of those who pass examinations to candidates is on the increase. The inference is inevitable that large numbers of pupils enter the secondary classes, especially those of the middle stage, who have no intention of persevering to the conclusion of the course or the attainment of a standard in English which will be of practical value to them. The loss of energy entailed upon such pupils and their teachers is considerable. It may be urged against this calculation that it confuses the school with the college course. This argument would be cogent if the school course led in any substantial degree to other avenues of life or education than the university. But the majority of those who matriculate enter college—even if the conventional figure of 9,000 such entrants be regarded as correct. As a matter of fact the number of students in the first year class of colleges is probably much greater; the number of those who completed the second year and appeared in the intermediate of 1912 was 9,600. Thus, for those who complete the school course, the university offers the natural continuation; and, of those who enter the university, not one in three manages to graduate.

Conclusion.

230. The whole subject is one which demands close consideration. In the first place, it is obvious that large numbers of pupils are entering English schools (often of a very inferior type) whose pecuniary conditions or mental calibre will not carry them on to the conclusion even of the school course. Their time is mainly occupied in learning a foreign language up to a standard which can be of little or no value to them, while mental development and the gathering in of information which would be possible for them in a place of vernacular instruction are checked and superseded by a short-lived attempt to master a difficult tongue. Secondly, the avenue of education which is selected is narrow and monotonous. The great majority of pupils crowd into the literary courses with a view to entering professions. The number of those who bifurcate into technical or other specialised studies is small. The result is that there is little or no free play for those whose intellectual characteristics are not fitted for the high school or university course. The institutions which impart this kind of education suffer from overcrowding and the admission of pupils whose slender capacity is bound to react adversely upon others, while the rush into examinations necessitates wooden (and lifeless) systems of testing.

* Report of the Board of Education for the year 1911-12, paragraph 14.

† This includes middle vernacular schools. But the number in the middle stages of these schools is small and not infrequently the pupils are learning English.



A LOWER PRIMARY SCHOOL, BENGAL.

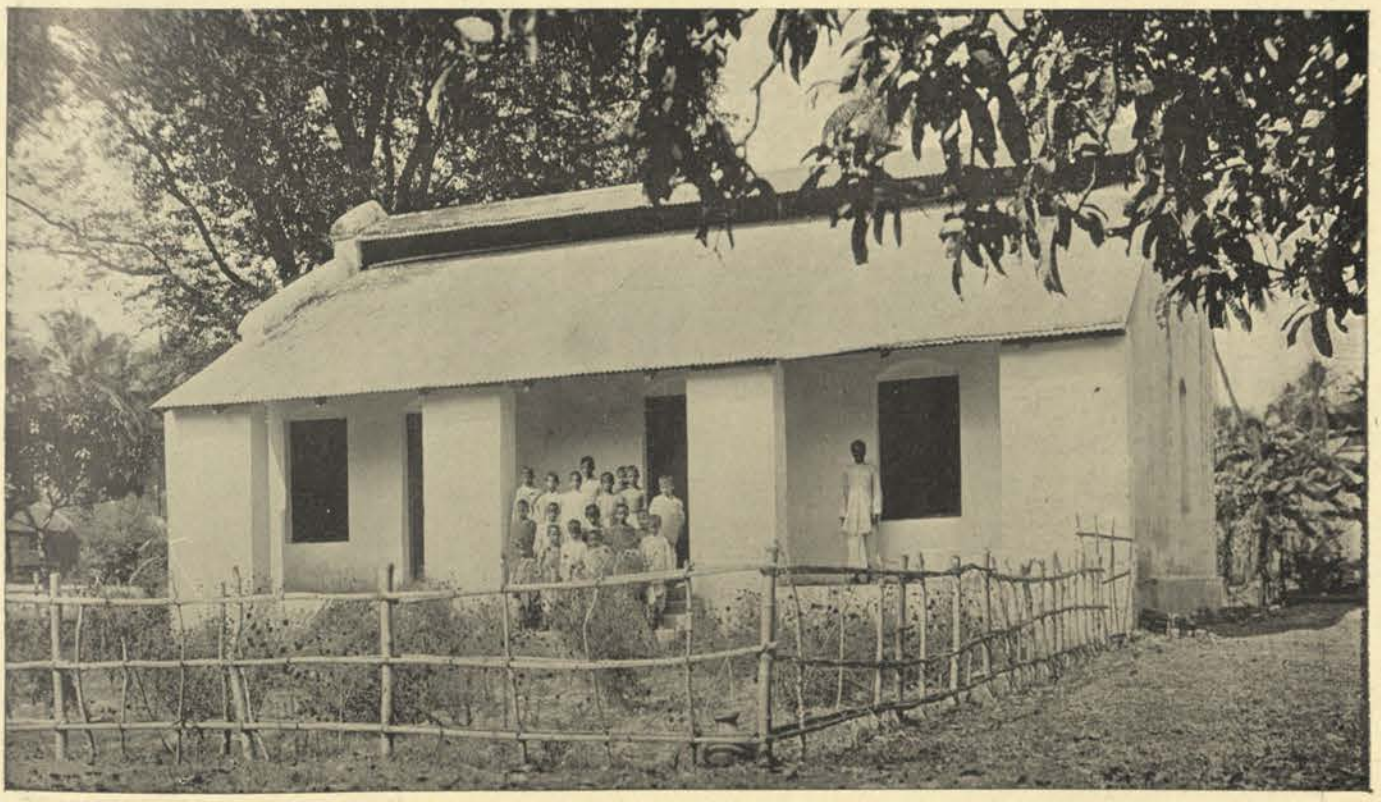
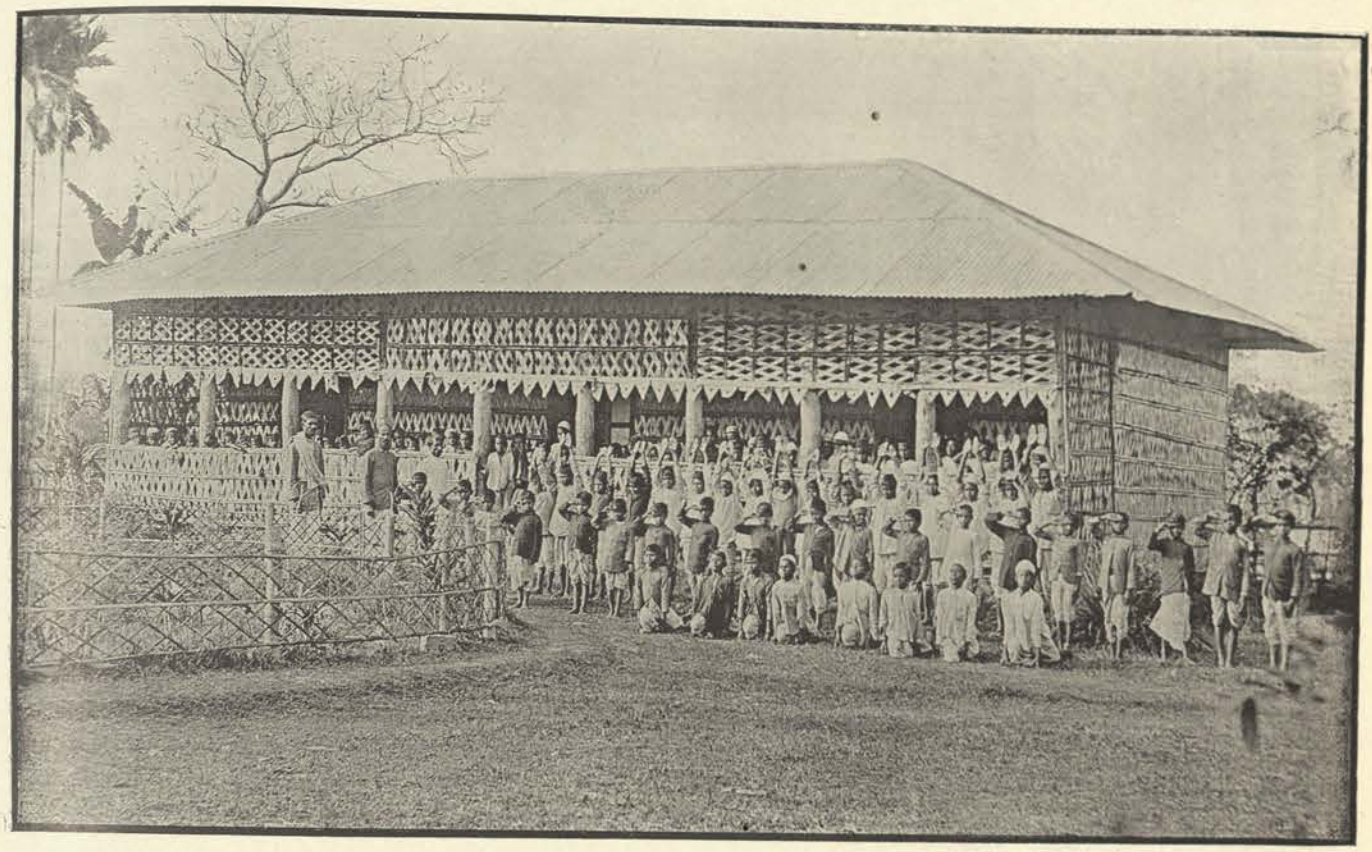


Photo.-Mechl. Dept., Thomason College, Roorkee.

TYPE PLAN, UPPER PRIMARY SCHOOL, BENGAL.

Photo.-Mechl. Dept., Thomason College, Roorkee.

LOWER PRIMARY BOARD SCHOOLS, DACCA.



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LOWER PRIMARY BOARD SCHOOLS, CHITTAGONG DIVISION.

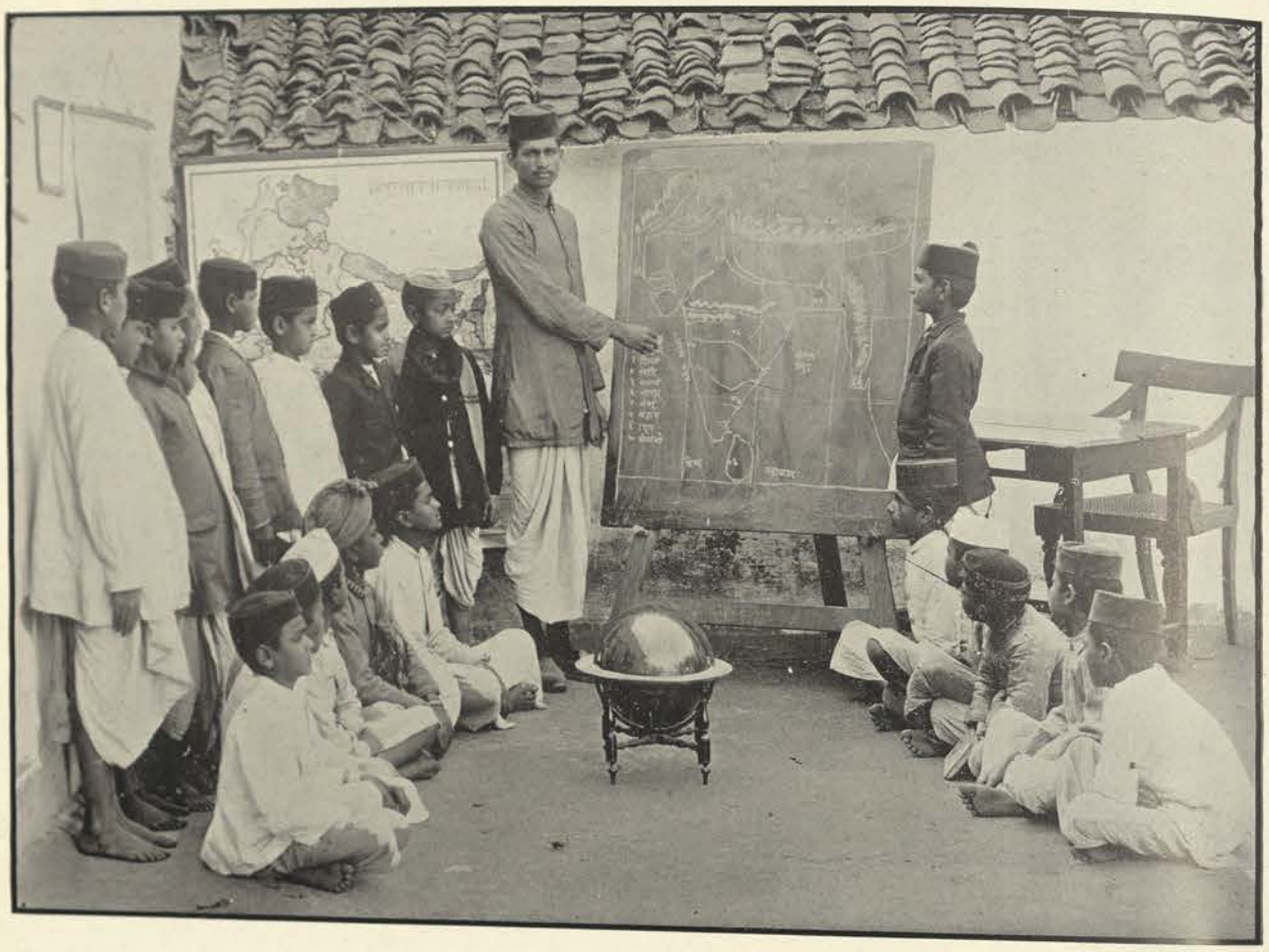


Photo.-Mechl. Dept., Thomason College, Roorkee.

PRIMARY SCHOOLS AT WORK.

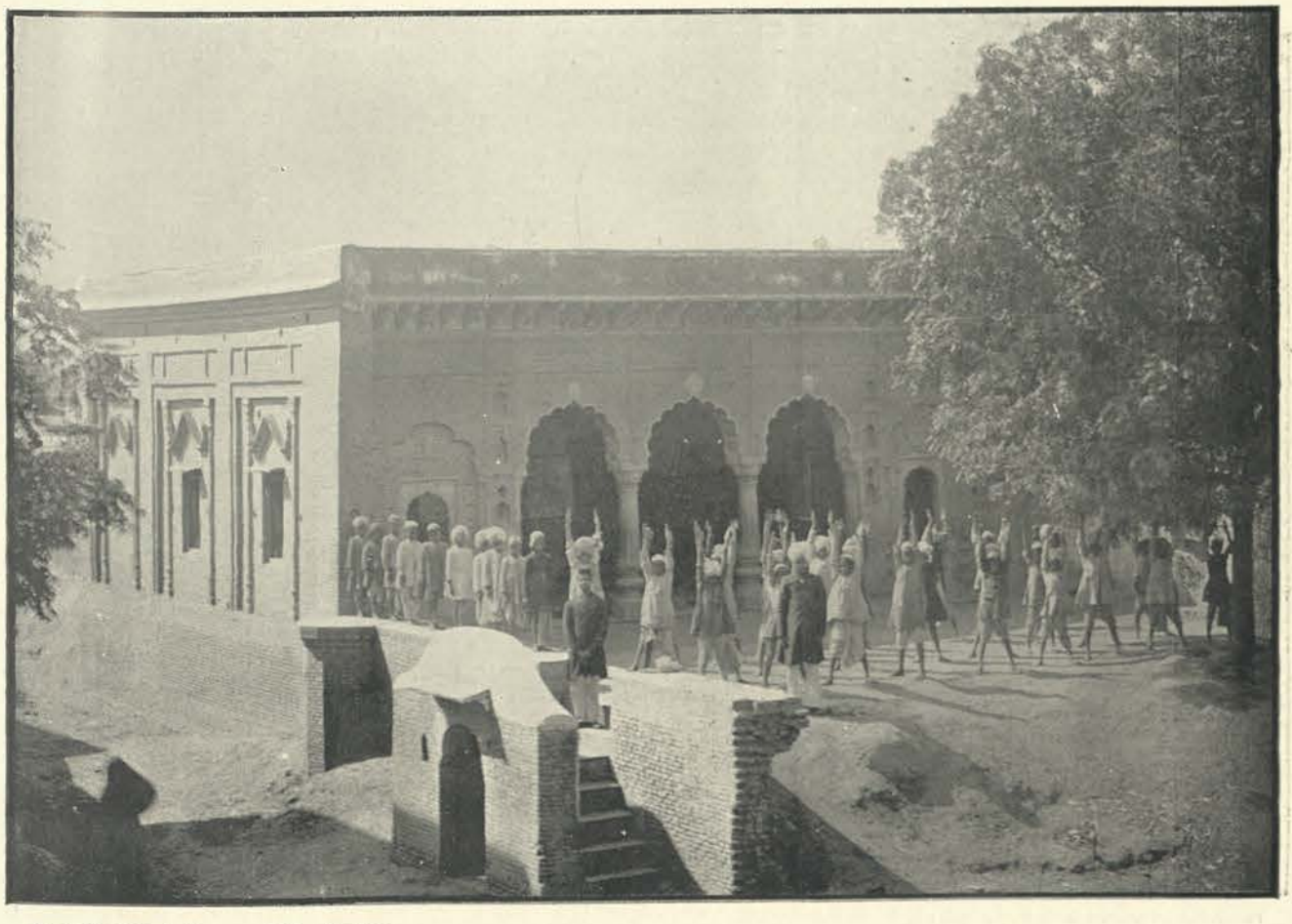


Photo.-Mechl. Dept., Thomason College, Roorkee.

PRIMARY SCHOOLS AT WORK AND PLAY.

A PRIMARY SCHOOL IN THE NORTH-WESTERN FRONTIER PROVINCE.

Photo.-Mechl. Dept., Thomason College, Roorkee.

A PRIMARY SCHOOL AT EXERCISE.

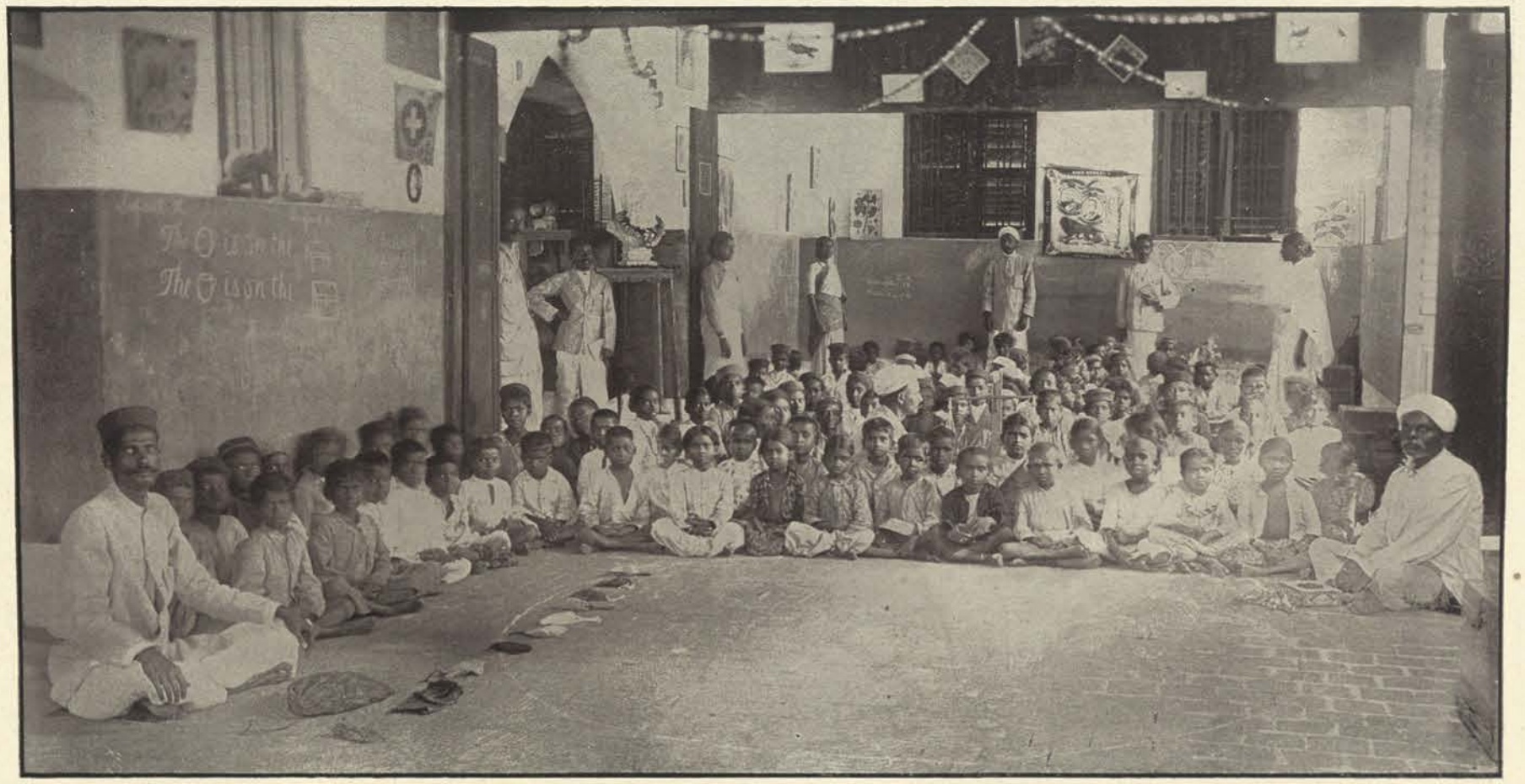


Photo.-Mechl. Dept., Thomason College, Roorkee.

DAMODHAR NAIK SCHOOL, TEYNEMPETT, MADRAS.

Photo.-Mechl. Dept., Thomason College, Roorkee.

A VERNACULAR SCHOOL IN BURMA.

CHAPTER VIII.

PRIMARY EDUCATION.

I.—General.

Definition.

231. Primary education, as defined by the Indian Education Commission of 1882, is the instruction of the masses through the vernacular in such subjects as will best fit them for their position in life. It is mainly carried out in vernacular primary schools. In Bombay and generally in the Central Provinces the same kind of school that educates the boy whose instruction will cease with the primary stage educates those also who will proceed to secondary schools. In Burma, too, the primary departments of secondary schools are sometimes held in separate buildings and ranked as primary schools; English is taught in them. There are a few other exceptional cases where English is taught in primary schools, as for instance in Madras where it is an optional subject. In the main, however, the definition holds good; and all these institutions are included in the figures of this chapter. Where necessary for purposes of calculation, primary sections of secondary schools are also included. In the section on literacy, the figures of girls' schools are taken into consideration. For the rest, the chapter deals with primary schools for boys, Indian and European.

Organisation.

232. The general organisation of schools has already been described and shown in diagram form in the preceding chapter. Ordinarily speaking, there are two infant classes, followed by two or three standards; these constitute what is called, in some provinces, a lower primary school or the lower primary section. Some schools have two higher classes and are generally known as upper primary schools. The addition of yet a further two classes constitutes a vernacular middle school. As this kind of school is really the last link in the chain of vernacular education, it is classed for purposes of description and statistics as primary and is dealt with in the present chapter. Middle vernacular schools are unknown—or rather not so named—in Madras and Bombay; they are classed as elementary or primary schools in those provinces.

Management.

233. Primary schools are managed either by local bodies or by private agency. In either case, however, the local authority (for the most part the district and local boards) is often entrusted with the control and the finance of this most important branch of education. Here the grant-in-aid system has admittedly disappointed anticipation. But it is largely retained—for the most part in the Bengals, Madras and Burma, and to some extent in Bombay, the United Provinces, the Punjab and the Central Provinces, where, however, the board school system prevails. The reasons for this difference are partly financial, partly historical. Where the tradition of education existed and schools were numerous, the state or the local authority could not undertake the support of all institutions and contented itself with the grant of a small subsidy to persons who established or maintained schools. Where these conditions did not exist, the local bodies themselves founded schools—generally of a markedly superior type to the privately managed institution. Secondly, the system of grant-in-aid has taken root where the indigenous school abounded or was discovered capable of development. This statement, however, must be received with some caution. On the one hand, we have the successful utilisation of the *mulla* school in Sind; on the other, many of the so-called *pathshalas* of Bengal are not of the indigenous type at all or of any antiquity, but simply venture schools set up by men who wish to derive a competence from teaching. Accordingly some areas are covered with a network of small aided schools, often ill-found and poorly staffed; others possess board schools in central villages with their own buildings and teachers on assured pay; others again exhibit a mixture of both systems. Burma is, as so often, exceptional. There are no district boards in that province. Cess schools,

however, are maintained; and considerable use is made of the truly indigenous *pongyi kyaung*. The subject of management is treated in detail in a separate section.

II.—Progress in the quinquennium.

Numerical increase.

234. In the quinquennium 1897—1902 there was an actual decrease in primary schools and pupils. In the quinquennium 1902—1907 there was an increase of 10,721 public schools and of 621,539 pupils in them. This increase was described by Mr. Orange as the largest, both as regards schools and pupils, which was recorded as having taken place in a similar period. During the period under review the increase in schools was less rapid than in that preceding and amounted to 7,745. But the increase of 891,980 pupils far exceeded previous records.

Just as, in the case of secondary education, it is necessary to exclude those studying in primary departments of secondary institutions, so, in the case of primary education, the full number of pupils must be calculated on the number in primary schools and in primary departments of schools of higher status. The result is shown as follows:—

	Total number of pupils in		Percentage of increase.
	1907.	1912.	
Pupils in primary schools . .	3,630,668	4,522,648	24·6
Pupils in primary departments of secondary schools . . .	356,061	475,361	33·5
TOTAL . .	3,986,729	4,998,009	25·4

Primary schools have increased during the quinquennium from 102,947 to 110,692, and the pupils in them from 3,630,668 to 4,522,648, or by 7·5 and 24·6 per cent. To these should be added (as explained in section XII) the pupils in special schools and in private schools of an elementary character. These number 470,669, and the total of boys reading in such schools thus comes to 4,993,317. Details of the figures are given in supplemental tables 96 and following. These deal with primary schools only—save where pupils in primary departments of secondary schools are specially mentioned; and the same remarks apply to the figures embodied in the present chapter.

Distribution.

235. There is one primary school for every 5·3 towns or villages in British India, varying from one for every 2·2 in Madras to one for every 14·2 in the Central Provinces. This, however, is no sure criterion of the distribution of schools, since villages differ in point of organisation, size and distance from one another. In Bengal, for instance, where schools are most thickly scattered, the number of villages served by a single institution is almost double what it is in Madras. A safer guide is the number of square miles which go to each school. This is 10·2 for all India, as against 10·9 in 1907. In Bengal, a school serves 3·4 square miles; Madras and Eastern Bengal and Assam (the last notwithstanding considerable waste tracts of grass and jungle) fall into the same class, with 5·9 and 6·3 square miles respectively. In the next class come Bombay, the United Provinces and Coorg, ranging from over 11 to nearly 20 square miles per school. In no other province is there a school for an area less than 28 square miles; and in Burma and the North-West Frontier Province the figure rises to 48·4 and 50·7. Here again, however, any conclusions that are drawn must be modified by three considerations—the density of the population, the size of the schools and the uniformity of their distribution. The number of souls per square mile varies from 52 in Burma to 440 in the United Provinces. The number of pupils contained in a school varies from 31 in Bengal to 75 in the Central Provinces. Nor are schools always equably parcelled out; tracts inhabited by the higher castes are sometimes over-thickly schooled to the detriment of other areas; there are miles of forest and barren hill sparsely populated by aboriginals in small and widely scattered hamlets, where, even if schools were established, each could draw only a bare handful of precarious attendants.

236. A feature of the quinquennium is the increase in the average size of a school. In 1907 the average number of pupils was 36; it is now 41—an increase of 13·9 per cent. The following figures are significant, showing the number of pupils per school in 1907 and in 1912, the percentage of increase in the average enrolment and the percentage of increase and decrease in the actual number of schools :— *Average enrolment in a school.*

Province.	Average number of pupils in a primary school in 1907.	Average number of pupils in a primary school in 1912.	Percentage of increase.	Percentage of increase or decrease in total number of primary schools.
Madras	32	39	21·9	+12·5
Bombay	54	58	7·4	+22·4
Bengal	28	31	10·7	+7·0
United Provinces	44	52	18·2	-3·0
Punjab	45	53	17·8	+8·4
Burma	31	34	9·7	-3·8
Eastern Bengal and Assam	32	40	25·0	+1·1
Central Provinces and Berar	67	75	11·9	+20·8
Coorg	44	64	45·4	-2·4
North-West Frontier Province	46	54	17·4	+19·8
AVERAGE	36	41	13·9	+7·5

It will be observed that the average enrolment is generally less in those provinces where the aided school system prevails and where schools are thickly scattered; also that a small increase or even a decrease in the number of schools by no means involves an answering stagnation or diminution in pupils.

237. The number of pupils reading in boys' primary schools has increased from 3,630,668 to 4,522,648—that is, by 891,980 or 24·6 per cent. If to these be added the pupils reading in primary departments of secondary schools, the increase is from 3,986,729 to 4,998,009 or 25·4 per cent. The details for provinces as regards primary schools are shown below :— *Number of pupils in different provinces.*

Province.	Number of pupils reading in boys' primary schools in 1907.	Number of pupils reading in boys' primary schools in 1912.	Percentage of increase or decrease.
Madras	692,409	940,689	+35·9
Bombay	516,719	672,391	+30·1
Bengal	954,027	1,124,854	+18·0
United Provinces	418,480	480,544	+14·8
Punjab	141,559	179,588	+26·9
Burma	155,884	161,236	+3·4
Eastern Bengal and Assam	560,711	704,353	+25·6
Central Provinces and Berar	177,347	239,711	+35·2
Coorg	3,604	5,153	+43·0
North-West Frontier Province	9,928	14,129	+42·3
TOTAL	3,630,668	4,522,648	+24·6

The record is one of marked progress. Two provinces require special mention. In the United Provinces, there was a set-back in primary education in the years 1908—1911. In the last year of the period there was a recovery. Despite exhaustive enquiries, the cause is not yet altogether clear. Contraction of expenditure in certain years and the visitations of plague were partially responsible. "But," runs the resolution of the Local Government, "the most generally operative cause is to be found neither in contraction of expenditure nor in the visitations of epidemic diseases. The period 1905-06 to 1907-08 was one of rapid expansion, and the lines on which this expansion was carried out were not in all cases sound. In more than one district schools, in particular aided schools, were undoubtedly opened which did not

justify their existence and when the boards came to scrutinize the results obtained, it was inevitable that many of these should be closed. Moreover, in many cases the eagerness for expansion had thrust aside financial foresight; and when boards came to review their commitments, they found themselves faced with the necessity of neglecting other services in their charge if they attempted to maintain efficiently their new educational enterprises. His Honour has no wish to prejudge an enquiry which has not yet concluded; but he finds in the recent history of primary education a strong *primâ facie* corroboration of his belief that, unless the enthusiasm for education is balanced by the clearest provision for its financial requirements, the result is bound to be ineffective and disappointing. Haste in spending our grants is not necessarily true service to the cause."

The other province whose figures demand comment is Burma, where the increase is small. Mr. Covernton remarks that reductions in grants and bad seasons have weeded out the weakest public schools, and he surmises that some of the pupils have been relegated to unregistered institutions. It is to be remembered that in Burma the unregistered monastic schools educate considerably more than half the pupils, that their figures (which probably do not represent the full number of pupils) are not shown in the table above, that the percentage of literacy is higher than in other provinces, and that the margin for increase is consequently smaller.

Percentage of boys at school.

238. The percentages to those of a school-going age who are reading, first, in primary schools, second, in these and the primary classes of secondary schools are shown below :—

Province.	Percentage of boys in primary schools to boys of a school-going age.	Percentage of boys in the primary stage to boys of a school-going age.
Madras	27·1	28·4
Bombay	30·0	30·3
Bengal	25·5	28·1
United Provinces	12·7	13·8
Punjab	10·9	14·5
Burma	13·5	19·1
Eastern Bengal and Assam	25·3	29·7
Central Provinces and Berar	19·6	22·3
Coorg	27·2	27·3
North-West Frontier Province	8·0	11·7
AVERAGE	21·5	23·8

Bombay, Eastern Bengal and Assam, Madras and Bengal show the largest numbers under elementary instruction. In Burma, where education is widespread, the number of unrecognised schools marks the true condition of things. In Bombay, where secondary schools have no primary classes, the difference between the columns is insignificant.

Schools and pupils by management.

239. A special section will be devoted to management. And it is only necessary to give here the classification of schools and pupils for India.

	Government.	Board.	Native States.	Aided.	Unaided.	TOTAL.
Primary schools for boys	505	26,115	2,889	65,650	15,533	110,692
Pupils in primary schools for boys	25,773	1,564,306	176,770	2,352,243	403,556	4,522,648

The principal increase has been in board schools; the reasons for this will be explained later.

240. The distribution by race and creed is shown in the same manner as for boys' secondary schools. *Distribution by race and creed.*

Race or creed.	Total number in primary schools.	Number of pupils of a school-going age of whom 10 are in a primary school for boys.	Percentage of increase in the last five years.
Europeans and domiciled community	1,786	218	+5·5
Indian Christians	114,069	30	+25·7
Brahmans	471,420	32	+16·1
Non-Brahmans	2,721,403	91	+25·6
Muhammadans	924,713	94	+25·3
Buddhists	146,770	109	+2·1
Parsis	4,316	30	-9·9
Others	138,171	99	+76·1
TOTAL	4,522,648	85	+24·6

The small number of Europeans reading in primary schools is accounted for by the fact that this community generally frequent secondary schools with primary sections attached. The increase in the number of non-Brahmans and Muhammadans is noticeable.

241. It is important to consider the relative number of pupils in the three divisions of the primary stage. This is shown for provinces in the supplemental table no. 105, and is calculated on the numbers both in primary schools and in the primary stages of secondary schools. They are given below in brief form. *Distribution in stages.*

Stages.	Total number in each stage.	Percentage to total.
Number of boys in the upper primary stage	582,163	12·5
Number of boys in the lower primary stage reading printed books	2,894,807	62·1
Number of boys in the lower primary stage not reading printed books	1,184,131	25·4
TOTAL	4,661,101	100·0

Since 1907, the number in the highest stage has increased by 25·2 per cent., that in the second stage by 19 per cent., and that in the lowest by 35·2 per cent. The large increase among the infants is inevitable where there is a large increase in the total of pupils. But it is satisfactory to find that the increases in the two higher stages taken together have been proportionately greater.

242. The subject of the last paragraph has to be regarded in another light—the length of time for which children remain at school. This has considerable bearing upon the question as to how far the population of any province is touched by education; for the numbers actually at school are affected by the duration of school life. A very rough guide to the length of school life in different provinces is shown by the proportion of pupils in the upper primary stage to the total in primary stages. *Pupils in the upper primary stage.*

Province.	Proportion of pupils in the upper primary stage to those in the primary stage in 1907.	Proportion of pupils in the upper primary stage to those in the primary stage in 1912.
Madras	7·2	5·8
Bombay	33·3	31·0
Bengal	6·0	6·9
United Provinces	12·0	14·1
Punjab	18·9	19·7
Burma	16·5	20·3
Eastern Bengal and Assam	7·2	7·5
Central Provinces and Berar	14·9	13·9
Coorg	33·3	25·0
North-West Frontier Province	21·4	19·0
AVERAGE	12·3	12·5

The question of the duration of school life is so important that it will receive special treatment in section XII. The figures here shown bear out (save in the case of Burma) what will be indicated there—that children remain longest at school where the board system prevails and where in consequence the education available is of a higher order.

Expenditure.

243. Direct expenditure on primary boys' schools is now Rs. 1,79,62,453. Between 1902 and 1907 the increase was by Rs. 31,26,243; between 1907 and 1912 it was by Rs. 42,91,550. The amounts derived from different sources are as follows:—

	Amount contributed in		Percentage to total expenditure in	
	1907.	1912.	1907.	1912.
	Rs.	Rs.		
Public funds . .	89,50,433	1,17,91,788	65·5	65·6
Fees	32,03,786	40,87,951	23·4	22·8
Other private funds .	15,16,684	20,82,714	11·1	11·6
TOTAL . .	1,36,70,903	1,79,62,453	100·0	100·0

Public funds also contribute Rs. 1,19,902 a year in scholarships—a sum which is not shown in the figures above.

Public funds are made up of the amounts contributed by government and by boards. The financing of primary schools and the part played by government (the full contribution made by which is concealed in the figures of board expenditure) are complicated questions which will be dealt with presently. Here it will suffice to observe that public funds find nearly two-thirds of the expenditure. The variations among provinces are large. The fee income in Bengal is double that in any other province, Madras is far ahead in income from private sources other than fees, while the proportion of expenditure from public funds is far the greatest in the Central Provinces. In Bengal public funds contribute rather over nine lakhs, against over 16¾ lakhs of fees; in Eastern Bengal and Assam the amount of public funds just exceeds the amount of fees (the one is over 8½ lakhs, the other 8⅓ lakhs); in Madras the former exceeds the latter more than three times, in Bombay and the United Provinces some ten times, in the North-West Frontier Province fifteen times and in the Central Provinces nearly thirty-nine times. The percentage of public to total expenditure for each province will be found in supplemental table no. 112.

Average expenditure per school and pupil.

244. The average expenditure on a boys' primary school is Rs. 162 a year, varying from Rs. 431 in Bombay to Rs. 83 in Bengal. In 1907 the average expenditure was Rs. 133; the cost has risen during the quinquennium by Rs. 64 in Coorg, Rs. 57 in the Punjab, Rs. 42 in Bombay, Rs. 40 in the Central and the North-West Frontier Provinces, Rs. 38 in Madras and the United Provinces, Rs. 21 and Rs. 20 in Eastern Bengal and Assam and Burma, and Rs. 7 in Bengal. The cost of a school under public management is Rs. 320, of an aided school Rs. 116 and of an unaided school Rs. 56. Two considerations, however, modify these figures. In some cases the fees in board schools are credited to the board and should not be shown as an item of expenditure; in the case of privately managed schools the teachers sometimes receive perquisites which are not shown in the returns. The average annual cost of educating a pupil in a boys' primary school is Rs. 4·2, varying from Rs. 7·6 in Bombay to Rs. 2·9 in Bengal.

Sources of income.

245. The ratios borne by public funds, fees and subscriptions to the total expenditure on primary schools are 65·6, 22·8 and 11·6 per cent. respectively. The figures for fees and subscriptions cannot be regarded as thoroughly accurate. The average fee annually paid by a pupil is Re. 0-14-6—that is, one shilling and two pence halfpenny. Details regarding fee income will be given later. The total direct expenditure from public funds on primary schools for boys and girls to the total direct and indirect expenditure from public funds on education is 31·1 per cent. This does not include the cost of inspection, scholarships, buildings, etc., for primary schools. In reality, therefore, the expenditure on primary schools is higher; as compared with total direct expenditure on all institutions, it is 49·0 per cent.; nor does this

include the cost of primary education in the lower stages of secondary and in special schools. Indirect charges cannot be accurately divided.

246. The quinquennium, therefore, has seen a large expansion in the number of pupils—proportionately larger than that in the number of schools and also larger than any previous recorded increase. The direct expenditure on primary education has increased by nearly 31 per cent., the expenditure from public funds by nearly 32 per cent. The average cost of a school has increased by over 21 per cent. *Statistical summary.*

247. Nor has the advance been only numerical. There have been activity in the building of schools and improvement in the qualifications and training of teachers. Courses have been modified. The subject of elementary instruction has begun to evoke peculiar interest, as shown in the debates in the Imperial Legislative Council. The question of further progress was fully discussed at the Allahabad Conference of 1911. The conclusions there arrived at have for the most part been adopted and are stated (in final form) in paragraph 11 of the resolution. The immediate needs are general surveys in each province with a view to securing an equable and sufficient distribution of schools, the enhancement of the teachers' pay, the formation (as in the North-West Frontier Province) of graded services, provision by pension or fund for old age, and the expansion of facilities for training. Finally, the Government of India have pronounced in favour of an extension of the principle of free elementary education. *Progress in efficiency.*

248. To facilitate these ends, imperial grants have been made to the provinces. In 1905 a grant of 35·40 lakhs recurring was distributed. Its effect has been visible during the quinquennium in enhanced direct public expenditure, which rose between 1904 and 1912 by Rs. 43,67,320. This sum exceeds the grant, but by no means represents the full increase of expenditure during the same period on primary education, since the cost of buildings, of enlarged inspectorates and of improved training facilities are not included in the figure. Between 1905 and 1911 no imperial grants were made for this purpose. In 1911, capital grants of Rs. 9·95 lakhs and Rs. 8·12 lakhs were given respectively for primary schools and for training schools for primary teachers. In 1912, a recurring grant was made of 35 lakhs (including five lakhs for girls' education). After the close of the quinquennium, 84 lakhs capital and 20 lakhs recurring were disbursed. The distribution of the grants of 1911, 1912 and 1913 to provinces was as follows :— *Imperial grants.*

Province.	Capital.	Recurring.
	Rs.	Rs.
Madras	19,20,000	9,90,000
Bombay	14,42,000	7,87,000
Bengal (including Bihar and Assam) .	29,50,000	18,21,000
United Provinces	17,50,000	8,53,000
Punjab	8,00,000	3,57,000
Burma	6,90,000	2,96,000
Central Provinces and Berar . .	6,55,000	3,31,000
Coorg	...	10,000
North-West Frontier Province . .	...	55,000
Agencies	2,14,000	46,000
TOTAL . .	1,04,21,000	55,46,000

Thus the total disbursed during the past two years has amounted to Rs. 55,46,000 (or £369,700) annually recurring and Rs. 1,04,21,000 (or £694,700) capital.

III.—School life.

249. The primary school, in its most typical form, is a village school, at which the boys of the village and surrounding hamlets attend. There are very few hostels for primary schools; the pupils all live near by. They are the children of the cultivators and tradesmen of the place and as many of those of the labourers and others as their circumstances and inclinations permit. *The pupils.*

The school house.

250. The school house may be a substantial building, an open shed, a hired verandah or the shadow of a tree. There is a certain body of opinion which favours the last two and deprecates expenditure on building material. The trouble about a hired verandah is that its shape, long and narrow, is totally unsuitable for teaching purposes; the hired room or house generally has the same defect, with that of insufficient ventilation in addition. The tree is attractive—so long as the weather is still and sunny. When the hot wind blows, burning and laden with clouds of dust, or when tropical rain is falling, it becomes untenable, and at no season can the children be surrounded with pictures, charts, black-boards and the other appurtenances that facilitate instruction and stimulate thought. The problem is to hit the happy mean—a building which shall be cheap and sufficiently large to render the conditions of light and air congenial to health, cheerfulness and easy study. The main obstacles are lack of funds and lack of agency. It is generally expected that not more than Rs. 500 should be expended on a house capable of holding 50 or more pupils. Too often houses are carelessly built or skimped, with the result that they collapse. In some places good results have been attained by entrusting the construction to the villagers themselves—and this suggests itself as an obvious plan where extraneous aid is rarely called in for the erection of the village houses. This is rendered easier and the work will be cheaply done, if the builders can use the materials and the general plan of construction (subject to the special needs of a school house) common to the locality. The defect of such a scheme is that the result produced is often in need of constant repair—a defect which can be remedied if the responsibility for renewal can be laid on the village community. Without a survey of the climatic and other conditions of every province—sometimes of several parts of a province—no hard-and-fast rule can be laid down. The record of attempts and of success or failure will be found in appendix XV. The illustrations at the beginning of this chapter show some of the styles adopted. A good school will have its compound, with a garden to provide object-lessons and certain experimental crops, and with a drill ground.

The teacher.

251. The teacher is a villager—not necessarily of the particular village, but generally of the neighbourhood. It is important (and the point was emphasised at the Allahabad conference) that he should be approximately of the class with those whose children he is called upon to teach. His qualifications and pay are described elsewhere in this chapter. His methods vary with his qualifications. A well-trained teacher who is interested in his work and appreciated by the village will manage his school remarkably well, maintain an effective but not irksome discipline, and combine the new method he has learned in the training school with the traditional system of the *guru* in a way that pleases, without puzzling, the children. Lest much of this chapter, especially the financial figures, threaten to depress the reader, it may be said at once that there are thousands of admirable primary schools in India, where the instruction given is effective and suitable. Were all like this, and could the total number be multiplied several times, all would be well. But the mere figures of training and bare educational qualifications show (what is fully corroborated by experience) that the teacher has too often been driven to his profession by inability to enter any other, has little or no capacity for the discharge of his duties, and shows but faint interest in his work. Better pay, careful training and effectual supervision are necessary to bring the bad schools into line with the good schools. This of itself will greatly increase the number of pupils (for the parent will more readily send his son and let him stay longer if he considers the instruction worth having) and will lay a solid foundation for further expansion.

School hours.

252. The child comes to school at hours dictated by the climate and the time of year. He may have a meal at home and arrive about eleven o'clock. Or, especially in the hot weather, he will come in the early morning, go home for his meal and perhaps return to school afterwards. In the Central Provinces the children always come early to school; and the half-timers do not return again. School hours vary from three to five a day. The holidays are made up of Sundays, numerous festivals, sowing and reaping seasons and perhaps a three weeks' vacation in the hot weather.

253. The school is divided into classes—generally four or six according to its grade. The building (if the school has one of its own) generally consists of one room, the overflow classes sitting in the verandah. There is some simple furniture for the teacher. There are a black-board, some maps, pictures (including those of the King-Emperor and Queen-Empress), and perhaps a small collection of objects—seeds, cotton, silk, specimens of soil and other matters of interest to the agriculturist. Several of the reports speak of the money which has been wasted in making benches for primary schools. These have no backs and, made without consideration for the size of the pupils, leave their legs dangling in the air. The children are happier sitting on mats on the ground; the money is better spent upon equipment. *Classes and their instruction.*

254. Many schools have only one teacher. Hence he has to set some of the classes down to sums or writing—perhaps under the eyes of a monitor—while he takes a class, or possibly two classes together, in reading or some other oral subject. The time-table is arranged to this end. The infants form letters with seeds on the floor, repeat rhymes and stories, and sing the multiplication tables. The higher classes use books in the local vernacular. How these books are produced is explained in chapter XXII of this volume. They contain stories, simple biographies, a little poetry, lessons on agricultural objects, crops and cattle, perhaps a few simple history lessons—in fact most of what the child has to learn. They generally contain pictures. These readers are inexpensive and often well printed and got up. There are exceptions—the Central Provinces administration is dissatisfied with its books and contemplates another set. Geography is taught from the map of the village, which the boys also draw frequently on their slates; then, if there are higher classes, from maps of the province, India and the world. The school may possess a globe (an item in the training course is often the manufacture of a globe by the teacher) for demonstrating the shape of the earth, the phenomena of day and night and the general outlines of land and water. There are also manuscripts for teaching handwriting, copies of the village land records and simple specimens of shop-keepers' account—all of which the children in the higher classes are expected to read and understand. In Burma new readers are being compiled, and a competent Burmese artist is making the illustrations.

255. Discipline is easy to maintain in the village school. The text-books contain lessons of moral instruction. Drill is regularly practised and the children play country games. A system of drill, or rather of exercises, called *deshi kasrat*, first organised in the Central Provinces, has now been introduced into several other provinces. It is based on the indigenous exercises practised by wrestlers, but is so graduated as to lead from simple to harder feats. *Discipline.*

256. The only general school examination permitted before that which closes the high school course is intended to conclude the primary standard. Nor is this a formal or external examination. It is conducted by the inspecting officer in whose jurisdiction the school is situated. He is presumably more or less cognisant of the conditions of the school and perhaps even of the general capacity of the pupils. The test is informal, conducted *in situ* and largely oral. It is theoretically held whenever the primary stage is considered to close—a matter of difference in different provinces. As the majority of pupils will not go further than the lower primary, it would appear reasonable to hold the examination at the end of that stage. But the boy who proceeds through the upper primary classes wants something to show for it; and the middle vernacular stage ends a distinct type of school career. In practice, therefore, some confusion arises, and certificates are awarded or tests held at different stages. In Madras there is no examination at all, but an elementary school leaving certificate is awarded to those who have completed the fourth or a higher standard. The abolition of the primary examination in that presidency is said to have been unpopular. But, since the new system was introduced, 74,000 leaving certificates have been issued. The primary stage in Bombay nominally ends at what in most provinces is the conclusion of the middle course; hence the vernacular final examination is a comparatively advanced test, the minimum age for passing which was previously 17, but has been lowered to 15 years. The Bengal report states that no examinations for the award of certificates are held during the primary stage of instruction, but *Examinations.*

only class examinations for promotion. The general table, however, shows the results of prescribed lower primary, upper primary and middle school examinations, in the first of which over 50,000 pupils passed in 1912; presumably no certificates are given on the result. These must not be confused with the so-called primary examination of Bengal which concludes the middle course, is held under private agency and is described in chapter VII. In Eastern Bengal school leaving certificates are granted at the end of the lower and the upper primary stage on the results of a test held by the teachers and supervised, as far as possible, by the inspecting officer. As, however, the examinations are held in thousands of schools about the same time, there can be but little supervision, the standard varies greatly and " the teachers are not always very judicious in granting leaving certificates." The certificates are of no value save for admission to a school of higher grade. In Assam the inspecting officers hold the tests both for upper and lower primary and give the certificates, which in turn admit to the scholarship examination. The United Provinces has no lower primary examination; there is an upper primary test and there is also a vernacular final examination at the conclusion of the middle course. The primary test in the Punjab is not shown as a prescribed examination; it is held by head teachers subject to the control of the inspecting staff, the only public examination for vernacular pupils being that which ends the middle stage. Burma retains three examinations, at the lower primary, upper primary and middle stages. In the Central Provinces an *in situ* test is held by inspecting officers (or in town by supervising headmasters) at the close of the lower primary stage. It is unnecessary to make any comparison of the results of these tests in different years. They are generally of a purely informal character and are of value mainly for promotion to secondary schools, to which a considerable number proceed from among those who conclude the full primary course.

Scholarships.

257. Scholarships are given to enable deserving pupils to continue their studies in the upper primary stage and to go on from that to the secondary school. The value of these scholarships ranges from Rs. 2 to Rs. 4 a month. Special provision generally exists for backward classes and tracts. The award is made according to merit, but in the Bengals great weight is attached to circumstances of poverty and conduct of the candidate. The examination is conducted *in situ* in Madras, Bombay, Burma and the Central Provinces. In other provinces examinations, especially for the award of scholarships, are held at centres subsequently to the ordinary *in situ* tests. In the United Provinces any boy who has passed the upper primary test may present himself at the scholarship examination. In the Punjab and the Bengals there is selection. In the two latter provinces the scholarships are distributed by areas and each school may send one candidate subject to a maximum of candidates not exceeding three times the number of scholarships available in any single area. The whole or nearly the whole of the expenditure on scholarships held in primary schools is met from provincial funds in Madras, Burma, the Central Provinces and the North-West Frontier Province. The bulk of the expenditure incurred in Bombay, the two Bengals and the United Provinces devolves upon boards. In Coorg, where the cost is inconsiderable, the local funds defray the whole amount. The sum expended on scholarships held in primary schools, that is, lower primary scholarships, is Rs. 1,31,974 as against Rs. 92,192 in 1907. This does not include the upper primary scholarships tenable in schools of higher status.

IV.—Management.

Public and private management.

258. The subject of management has been briefly treated in the first section. In 1907, one-fourth of the primary schools were under public management, the rest under private management. The same rough proportion still holds good, though the advance in public institutions has been more rapid than in others. The figures are—

	1907.	1912.
Public management	24,715	29,509
Private management	78,232	81,183

Details are shown in supplemental table no. 100. The percentage of publicly managed schools to the total is, in Coorg 93·7; in the Central Provinces 83·3;

in the North-West Frontier Province 82·7; in Bombay 81·4; in the Punjab 74·0; in the United Provinces 58·8; in Eastern Bengal and Assam 23·3; in Madras 19·0; in Bengal 1·2; in Burma 0·3.

259. The number of government primary schools is infinitesimal—505. They are generally established in backward tracts where district boards do not exist, or as model schools attached to training institutions. The small increase that has taken place in their number during the period is mainly due to the establishment of 97 such schools in Bengal. Board (including municipal) schools now number 26,115 against 21,625 in 1907. The main increases are of over 1,000 board schools in Madras, nearly 1,400 in Bombay and 1,500 in Eastern Bengal and Assam. Bengal has only 112 board schools; Burma has six. Schools managed by native States included in the report number 2,889, aided schools 65,650 (of which nearly 39,000 are in Bengal and Eastern Bengal and Assam, and over 15,000 in Madras), and unaided schools 15,533 (of which over 8,000 are in Bengal, over 4,000 in Madras and over 2,000 in Eastern Bengal and Assam). Thus Bengal and Burma depend wholly on the privately managed school. Eastern Bengal did so almost exclusively till a board school system was initiated during the quinquennium (Assam already had the board school system). Madras has a considerable number of board schools; but over four-fifths of its primary institutions are still of the privately managed type. In other provinces the number of board schools is greater than that of aided and unaided schools. *Government schools.*

260. During the last fifteen years the percentage of board schools to the total has been growing steadily and their popularity rapidly. Apart from the number of public schools, which now forms 26·7 per cent. of all primary institutions, the number of their pupils is significant—60 boys on the average reading in each board school against 36 in each aided school and 26 in each unaided school; and pupils remain longer under instruction in board than in privately managed schools. Nor is this popularity to be wondered at. The average annual cost of a publicly managed school is Rs. 320, that of an aided school Rs. 116, that of an unaided school Rs. 56. Not only is the education obtained in a public school better, but the fee is less than half that charged in a privately managed institution. And, while the fee in the former is undergoing reduction, in the latter it is rising. The average rates are as follows :— *Board schools and their popularity.*

	1907.			1912.		
	Rs.	A.	P.	Rs.	A.	P.
Average annual fee in a public primary school . .	0	7	4	0	6	9
Average annual fee in an aided primary school . .	1	1	3	1	3	1
Average annual fee in an unaided primary school .	1	2	8	1	5	3

The report from the United Provinces notices a considerable increase among pupils in board schools as against a decline in privately managed schools, and infers that the former " are easily the best instruments for spreading and establishing an efficient system of elementary education, that aided schools for the most part fail, while unaided schools are too few to have much significance." In Eastern Bengal, where the system of board schools was commenced on the formation of the new province, the report says, " The people are coming forward in many districts with offers of land and of contributions far in excess of the number of schools which the boards can annually undertake; and the schools themselves are gaining in popularity as the advantages of improved education are being realised. This is evident from the fact that while the average strength of an aided school is now 38 in Dacca, 37 in Rajshahi and 43 in Chittagong, that of a board school is 53 in the first, 46 in the second and 64 in the third. Indeed, there is already a demand for increased accommodation in these schools and for the enlargement of their buildings." The Allahabad conference of 1911 expressed itself in favour of an increase of board schools as ordinarily better than aided schools. Where board schools are financially impossible it considered aided schools should be increased in number, but not private venture schools.

261. Mr. Orange pointed out that the present treatment of aided schools as under private management in the sense required by the despatch of 1854 is a fiction. Most of these schools are not under " adequate local manage- *Privately managed schools.*

ment," nor do they receive endowments and subscriptions, with the exception of occasional presents from the parents. In Madras, indeed, 22 per cent. of the schools under private management are maintained by missions; and in the United Provinces, as will presently be shown, some effort seems to have been made towards local co-operation. But ordinarily the grant-in-aid system has come to be applied, not as a subsidy to private funds, but to schools where fees and grant form the only sources of income and the teacher is himself the manager. The figures alone are sufficient to show the inferior condition of these institutions. The aided school generally springs out of the unaided school. Mr. Nathan stated that the paucity of unaided schools in all provinces save Madras and Bengal appeared to show that there was left no large outer circle of indigenous institutions suitable for inclusion in the public school system. The falling off in unaided schools continued up to 1907, over 3,000 disappearing in the quinquennium ending with that year. But it is remarkable that in the period under review they have again increased from 14,288 to 15,533. The increase has taken place mainly in Bengal where over 2,000 new schools of this type are recorded, while in Madras there has been a falling off of nearly 1,000 such schools. The Bengal report observes that these figures seem to show that the demand for primary education is so great that it insists on being satisfied even though public aid be not forthcoming. They certainly prove that the indigenous school is not the only source of supply for the public system, and that in Bengal at least (notwithstanding the close distribution of institutions) the venture school is still able to establish itself.

Powers of the boards.

262. Whether the system is one of board or of aided schools or a mixture of both, the immediate control is largely in the hands of the boards. Above the boards, government exercises control through rules framed under the Local Self-Government Acts and through the inspecting agency of the departments of public instruction. The boards work under these rules. The executive authority is ordinarily an education committee of the board, of which the deputy inspector of schools is usually a member and (naturally) a very important adviser. In some provinces the district boards have delegated some of their functions to local or *taluk* boards, whose powers are co-extensive with a sub-division of a district. A board school is the property of the board; the teachers are board servants; their pay is regulated by rule; their appointment, transfer and dismissal are controlled, subject to certain departmental checks, by the board; in some cases their service is pensionable. An aided school receives a subsidy from the board, under broad rules laid down by government, sometimes applied through local rules framed under each board. An account of the grant rules will be given presently.

School committees.

263. In some provinces committees have been formed for each board school and attempts have been made to form them for aided schools also. Their success has not been conspicuous. The potentialities of such committees are obvious; but they have not ordinarily fulfilled expectation. In the Central Provinces such committees are a long-standing institution and do useful work. The pay of the board school teacher being quite independent of fee-collections, the utilisation of the fee-income as well as a certain amount of supervision over the teacher's performance of his duties have been entrusted to these committees; this has stimulated their interest in school affairs. The report from the United Provinces says :—

"The practice of organising village committees, which commenced during the previous quinquennium, has been extended, and in some districts they have been formed for all village schools. The objects aimed at in constituting them are not only to arouse local interest in education by focussing it in a permanent body, but also to secure an organ of local opinion and advice with which the district board can deal. It is the hope of those who advocate the plan that a school will come to be regarded as an indispensable part of village life in which the village can take a genuine pride. It was scarcely to be expected that the committees would be an instantaneous success, and in fact they have not been so. In most cases it must be regretfully recorded that they have displayed complete apathy. Sometimes they have been positively mischievous by affording a convenient playground for the faction which seems to exist in every Indian village, and have dragged the teachers into their quarrels. But after all a few years are as nothing in the life of a people, and imported systems of local self-government need time to become acclimatized on Indian soil."

In Eastern Bengal and Assam managing committees are attached to all primary board schools, but are reported to have been so far either inactive or mischievous. " They seldom meet," says one inspector, " or evince any interest in their schools. If they do happen to concern themselves at all with the schools, it is more than not often to create difficulties in the administration by dragging the teachers into village quarrels."

Financial arrangements.

264. The local boards' Acts generally prescribe that these bodies shall make provision for the diffusion of primary education within their areas so far as the funds at their disposal will allow. Rule or practice has attempted to lay down a certain minimum of expenditure in the case of each local body. The Madras report states that 15 per cent. of the resources of boards and municipalities is generally taken as the proper proportion for expenditure on education. In Bombay the Act prescribes that the amount of the board's revenue to be set aside for educational purposes shall be not less than one-third, subject to certain reservations. In the Bengals, municipal boards were expected to spend 3·2 of their income on primary education; and, until this was done, they could not expend money on secondary schools. Sometimes a municipality will spend more, but oftener less than the required percentage. In Bengal the order was withdrawn in 1910. " The effect of this withdrawal," says the last administration report, " remains to be seen, but it may be said that as a rule the members of municipalities take little interest in the education of the masses and are apt to divert their funds to the support of schools with which they are more directly concerned." In Eastern Bengal and Assam a scheme was devised during the quinquennium under which each board was expected to spend annually on primary education the amount it expended in 1904 *plus* the amounts of the imperial or provincial grants for that purpose which it received in 1905 and ensuing years; if the full expenditure was not incurred the amount of grant distributed to the board in the forthcoming year was proportionately reduced. The previous rule in Assam demanded the expenditure of 20 per cent. of the board's income on education. In the Central Provinces the annual expenditure of the board on education may not exceed the aggregate of the sums represented by the education cess, the government grant, fee receipts, private subscriptions and the savings of previous years. In the North-West Frontier Province a rule whereby boards were required to devote 25 per cent. of their annual income to education proved unsatisfactory; at the end of the quinquennium a fixed amount was prescribed for this object, calculated at 25 per cent. of the average income of the last five years, to be enhanced only on an appreciable increase of revenue. Rules are not laid down for other provinces. But ordinarily some means are taken to ensure a proper expenditure on education. Sometimes the board's budget is forwarded to the director of public instruction, who sends his remarks to the commissioner.

Local funds and Government subsidies.

265. The income of district and local boards throughout India is Rs. 5,13,23,730.* The expenditure on primary education is Rs. 91,46,944, or 17·8 per cent. But a considerable proportion is borne by provincial revenues handed over to the boards. Board funds are proverbially inelastic. They are unable to meet the strain laid on them by a policy of educational expansion. Government has to finance them—partly by grants for general purposes, partly by special educational grants such as those made when imperial funds are distributed to Local Governments for this purpose. How much of the local fund devoted to education is thus in reality provincial cannot be accurately ascertained. But the following passage from the Bengal report is interesting :—

" Government also aids primary schools through the agency of district boards. In the last year of the quinquennium under review, government gave over Rs. 5,92,725 to district boards for the spread of primary education, which has been shown in the statistics as expenditure from district funds. On the other hand, the proportion which the contributions by district boards bore in 1891-92 to the total expenditure from public funds was 68·5 per cent. Fifteen years afterwards in 1906-07 it was 72·8, and in 1911-12 it was 64·2 per cent. The district board expenditure during 1911-12 was less by Rs. 68,289 than the contribution in 1906-07. These figures would seem to show that the

* Includes figures for 1910-11 in the case of Bombay as the report for 1911-12 was not received from that presidency at the time of the preparation of this review.

proportions in which the district boards and the government bear the expenditure on primary schools have been reversed since the last quinquennial review, and that the district board funds intended for the support of primary schools are growing inadequate for the purpose."

As regards the distribution of provincial funds among boards, the method adopted in Eastern Bengal and Assam has already been described. The following passage from the Punjab report is of interest on this subject :—

"An important step forward was taken in 1910-11 by the introduction of a system of proportioning the grants made to district boards for the extension of primary education on the basis of teachers' salaries. The imperial and provincial grants had hitherto been distributed on rough-and-ready methods, lump sums being handed over to the boards according to an estimate of their probable requirements but without any guarantee that payments on the same scale would continue. The system now in force may be briefly explained. Government undertakes to defray two-thirds of the salary of every qualified teacher in a vernacular school, *plus* all contributions made by the boards to teachers' provident funds, and half the cost of school repairs. The condition attached is that a teacher for whom a salary grant is claimed should be in receipt of a minimum salary of Rs. 15 if a head teacher, and Rs. 12 if an assistant. In addition special recurring grants are made for backward districts, and grants are also given for capital expenditure on buildings. As the small amount needed for school contingencies can be met from the fees levied, the net cost to the boards of maintaining each vernacular school is approximately one-third of the pay of the teacher or teachers employed, and less in backward districts. Should larger subsidies be sanctioned from imperial funds without a corresponding expansion of the income of the local bodies, a raising of the rate of grant will doubtless be considered; but on the presumption that part of the cost of primary education has to be met from local taxation, the proportion recently sanctioned does not appear to be an illiberal arrangement for the local bodies concerned; it has at any rate the advantage of substituting a system resembling that adopted in European countries for a more or less haphazard distribution of bounties, and enables the boards to forecast their income and expenditure."

Municipal schools.

266. A word must be added about schools maintained or aided by municipalities. These are included in the returns along with district and local board schools; but a distinction is made between the funds contributed by these two kinds of bodies. The income of municipalities throughout India is Rs. 7,49,38,941*; the amount expended on schools and colleges is Rs. 30,88,283 or 4·1 per cent. The amount of literacy in cities far exceeds that in rural areas. But the condition of privately managed schools in municipal areas is often very inferior, the teachers are ill-trained (frequently too old to be trained) and accommodation is a difficult problem where unsuitable rooms have to be hired at a high price.

Schools in Bombay and Calcutta.

267. The inspector of the Central Division writes of Bombay city :—

"As regards Bombay, the prominent feature of the quinquennium was the adjustment of certain charges between the government and the Bombay municipality, whereby the Bombay corporation was relieved of all expenses on account of the city of Bombay police and in place thereof it undertook certain medical, educational and other expenses, till then devolving upon government. By virtue of this arrangement the entire management of primary education now rests with the corporation, which is wholly responsible for it in the city. From the year 1908, a general IVth standard examination is held at different centres in which all municipal schools and all aided schools, with a few exceptions, join."

Mr. Prior remarks that this change has made little difference; the corporation has always paid its educational servants liberally and treated them considerately, though it appears to remain lethargic about the housing of its schools. Mr. Prothero gives a somewhat dismal account of the state of affairs in Calcutta. In 1911-12 the Calcutta corporation spent Rs. 34,688 on education; but of this, Rs. 7,694 went on secondary schools, Rs. 11,756 on special schools, Rs. 2,923 on objects of indirect expenditure, and only Rs. 12,315 on primary schools for girls and boys. "During the quinquennium under review the attention of the chairman of the corporation was drawn to the fact that the municipality was spending over Rs. 4,000 of the Rs. 20,000 given annually in capitation grants to primary schools on schools which the department would not aid, because they taught English, or were guilty of other breaches of departmental rules. It was also brought to his notice that exemptions from rates, amounting to another Rs. 20,000 a year, were injudiciously given, and

* Including figures for 1910-11 in the case of the Bombay Presidency from which later figures were not received when this review was under preparation.

that in some cases high schools enjoy this privilege illegally." A committee met in 1910, when it was decided, among other things, that the grants to schools should in future be distributed in consultation with the department. In 1909-10 it had been proposed to open at the expense of the corporation thirty schools for Indian boys and girls, with industrial annexes. Nothing has come of this scheme, " and generally," adds the report, " the amount spent for primary education still falls far short of what might reasonably be expected from the municipality of the first city in India."

V.—Systems of grant-in-aid.

268. In the board school the teacher is a board servant. His pay is fixed —generally by qualifications, length of service and success. Other expenses are also met by the board, sometimes also from fees. In Assam, however, a system still prevails in board schools, approximating to that generally followed in aided schools. The pay of a teacher is partly fixed—Rs. 8 a month if he is certificated, Rs. 5 if he is uncertificated, but with some concession in view of ordinary examinations passed—and partly dependent on a capitation grant graded according to the stages in which the pupils are reading. *Difference between board and aided schools.*

269. Privately managed schools still form the commonest type in India; and the method whereby they are aided must be described. It is not necessary to enter into this subject with the minuteness displayed in the fifth quinquennial review. Full treatment was then required owing to the recent abolition of the results grant system and the reconstruction in every province of code rules which that abolition entailed. The systems then evolved stand almost unchanged to-day—bewildering, as Mr. Orange described them, in their manifold variety. Only their salient features are indicated here. A synopsis of the rules is to be found in appendix XVI. The grant is sometimes paid from provincial, sometimes from board funds. In Bombay, Burma and the Central Provinces it is paid by government.* In Bengal and Eastern Bengal and Assam it is paid by the board. In Madras, the United Provinces and the Punjab† it is paid sometimes by the one, sometimes by the other; in Madras the payment is now almost entirely direct from provincial funds. The authority which supplies the funds has the principal voice in deciding their distribution and the rules whereby subsidy is earned. But the rules framed under the Local Self-Government Acts and the inspecting officer serve to introduce a certain uniformity into the operations of the different boards in each province. *Systems of aid.*

270. As in secondary, so in primary schools, the methods of assessing annual grant are based on different principles which, however, frequently overlap. The amount of private resources, the qualifications of the teachers, the extent to which the prescribed curriculum is followed, attendance, the numbers in different classes, and general efficiency—all these, in varying combinations and with different values, are determining factors. The systems may be ranged in order according to the extent to which they permit of fluidity in assessment.

The simplest system is that of *Madras*, which gives Rs. 36 a year for each teacher in employment and eight annas a year for each pupil in attendance. Even here, the amount may be enhanced or decreased by 25 per cent. on the recommendation of the inspecting officer, and further increased by the director. Next come those systems in which the grant depends primarily upon the income and the expenditure, but may be modified on other considerations. This system prevails in *Bombay* and the *Central Provinces*, where the subsidy may not exceed one-half the local income or one-third the expenditure. In the former province the rule is mitigated by special terms for schools recently started and for those which deteriorate owing to no fault of their own. In the latter, the administration or the director may sanction an additional grant of one-third; and the amount is also determined by the condition of the school under various heads. In both provinces, the grant thus calculated is continued as a fixed grant subject to general maintenance of standard. The *United Provinces* has a system of fixed grants, which differs according as the money is provided by government or by the boards. The so-called primary English school is aided by government and may receive Rs. 150 a

* In certain parts of the Central Provinces and especially in Berar small local schools are also aided by the district and municipal councils.

† In the Punjab now entirely from local funds.

year fixed, an attendance grant of Rs. 2 or Re. 1-8-0 a year for each pupil in average attendance according to the standard in which he reads, and a special grant not exceeding one-fifth the salary of each trained teacher in the upper primary section. The ordinary vernacular school is aided by the board and receives, if it fulfils the necessary conditions, from Rs. 4 to Rs. 6 a month. Where the number of pupils has exceeded 25 during the previous year, one rupee extra is given, if there is only one teacher, Rs. 3 for each assistant if his presence is required. In *Assam* upper primary schools are aided; lower primary are, save in the hills, board institutions. In an upper primary school there must be a local contribution apart from fees, and the grant may not exceed five times (or, where education is in demand, two and a half times) this amount. The grant is partly fixed, partly dependent on the number of pupils enrolled in each class (as is the case with board schools in that area). While the Assam rules apply strict conditions to upper primary schools, the system of aiding lower primary schools in the hills of that area is very different and will be presently described. Grants in the *Punjab* are assessed on attendance (modified by classification and general condition) and on staff. The block grant is a capitation for each pupil—Rs. 2 a year in the lower primary and Rs. 4 in the upper primary department. Grants to indigenous or elementary schools are made under separate rules, but the rates are approximately the same. The staff grant is one-third of the salary of certificated teachers and monitors. Of the remaining provinces it may be said generally that the grant is calculated with reference to the condition of the school. In the two *Bengals*, subject to certain general requirements, a school may receive a subsistence allowance paid quarterly and a deferred allowance paid at the beginning of the next financial year. The amounts are often calculated on a test-card system prescribed by certain boards, under which marks are assigned for the proficiency of the school in point of buildings, staff, attendance, instruction, etc. This method has now been made more generally applicable by the publication of model rules. Too often, the amount is determined by what the restricted funds of the board can find for distribution among a host of institutions; the subsistence allowance may range from Re. 1-8-0 to Rs. 9 a quarter, the deferred allowance from Rs. 12 to Rs. 36 a year. *Burma* offers alternative systems of grant applicable to the class of schools known as "A" schools (which form the great majority). It retains a results grant system where the subsidy depends on examination, but is capable of enhancement in special cases. Such a method of assessment was considered peculiarly suitable to Burma. As an alternative, a fixed grant may be given, calculated on the average of the results of three years with an increase of 10 per cent. for schools of growing efficiency. This grant remains dependent on the result of annual inspection. Or, again, salary grants may be given. "B" schools (which are of inferior status) receive an attendance grant of Rs. 2 a year per pupil, limited to Rs. 150, and a grant of Rs. 2 for each month during which the attendance is certified as properly recorded. Lastly it remains to notice the primary schools in the hills of *Assam*. These schools are largely managed by mission bodies and aided by government, which gives to the mission a lump sum per annum without asking how it is distributed among the schools, the checks being inspection and a periodical statement of accounts. The condition of these hill schools was found during the quinquennium to be defective; the larger missions were persuaded to accept a partial distribution by capitation varying from class to class. It should be mentioned that these missions generally spend large sums on the maintenance of their schools—much in excess of the grant.

Two tendencies may be discerned among these various methods. First, though the results system has been abolished, save in Burma, the general efficiency of the school is always a determining factor. This characteristic approaches nearest to the old system when it takes the shape of capitation rates graded for different classes. But the capitation system does not involve the substitution of examination for inspection, and it fixes a wholesome responsibility on the teacher who makes the promotions, but suffers if his promotions are obviously improper. Second, grants tend to become fixed and liable to reduction, increase or suspension on the result of general inspection.

271. The rules applicable to ordinary schools generally admit of some relaxation or modification in the case of indigenous institutions, night schools, and other kinds of institutions which require special fostering. Thus, Bombay gives Rs. 2 for each boy in attendance at an indigenous school till its stability is assured, and Re. 1 per pupil in night schools. The United Provinces code allows a grant from Rs. 6 to Rs. 10 a quarter in indigenous schools In the Punjab these institutions receive special capitation rates. Bombay also offers a grant not exceeding Rs. 15 a year for the purchase of slates and books in such schools.

272. It is not essential to enter into details of building and equipment grants. The former are generally limited to one-third or a half of the total cost. But there are exceptions; and details will be found in appendix XVI.

VI.—Teachers.

273. In 1902 there were 106,000 teachers in primary schools—that is, one teacher for every 26 pupils. There are no certain figures for 1907; but, at the same rate, there would have been about 140,000 teachers. In 1912 there were 171,359 teachers in primary schools—that is, one teacher for every 29 pupils. *Number of teachers.*

274. Of these teachers, 42,554, or one-fourth, have received training. In board schools something less than half are trained, in aided schools less than one-sixth, in unaided schools less than one-twelfth. (These figures are for boys' and girls' schools, for masters and mistresses.) As regards qualifications in different provinces, Sir A. Bourne says of *Madras*:— *Qualifications.*

> "The qualifications of the teachers show a considerable advance during the quinquennium. The number of those without any qualifications fluctuated somewhat, but was the same in the first and fourth years. The number of those with professional certificates increased by 46 per cent., and with general educational certificates by 29. Professional certificates are now of two kinds. They are either probationary certificates granted on the result of a written examination at the end of the training school course or final certificates granted to teachers who have satisfied a board as to their professional skill at the end of a probation ordinarily of from one and a half to three years. The grant of certificates of approved service has been discontinued for many years, so that the number of teachers holding them is now inconsiderable. The department recognises also a class of teachers of proved ability, though untrained and not formally certificated. Teachers of both these classes appear in the tables as without professional certificates. The professional certificates are of two grades, secondary and elementary, but the demand for teachers of the secondary grade for secondary schools leaves very few of them for elementary schools and these are mostly employed as headmasters in the model schools of training institutions and in municipal board schools."

The circle reports in *Bombay* (save that from Kathiawar) give good accounts of the increase in those who are trained or have at least passed some qualifying examination; and this is generally attributed to the more liberal scale of pay. Teachers in British districts are more numerous, better qualified and better paid than ever before. The "face-value" of a first year training certificate is Rs. 12 initial pay, that of a second year certificate is Rs. 15; the maximum pay for which the holder of a third year certificate is eligible is Rs. 25. As already stated, these cannot ordinarily be given. Mr. Prior says, "I do not myself see that it will ever be necessary to make full provision up to the maxima offered in the vernacular masters' codes, as, if all could look forward to regular increments whether their work were good, bad or indifferent, every incentive to steady conscientious work would be removed." In the *Bengals*, where pay is low and the training schools are indifferent, the condition of affairs is worse than elsewhere. Things are slowly improving; but one fears that the training given by instructors who themselves draw only Rs. 18 cannot be of great value—a case of the blind leading the blind; while the proportion of teachers who possess no educational qualifications whatever is appalling. "The total number of teachers," says Mr. Prothero, "employed in primary schools for Indian boys and girls at the end of 1911-12 was 43,776. Of these 5,017 or 11·4 per cent. are returned as 'trained,' whilst 9,707 or 22·1 per cent. are returned as having no special qualifications. The remainder 66·5 of the total are returned as possessing 'other qualifications.' The 'other qualifications' are practically confined to the certificates of the former school examinations (middle English, middle vernacular, upper and lower primary). In 1911-12, a little less than 29,000 employed and returned as possessing 'other qualifications' had passed the lower primary examination only; and seeing that, under this head are included not only all the school examinations referred to above, but also the Sanskrit title and *madrassa* central examinations and 'other examinations,' the conclusion that practically all the 9,707 teachers, who are returned as possessing no special qualifications, have not read up to the lower primary standard seems inevitable." This is not a bright picture, but it is brighter than that of five years ago. Trained teachers have increased by 2,816; those who possess no qualifications have fallen by 2,617. The proportion of those who have only passed the lower primary examination is 52 instead of 60 per cent. It is observed that the main problem to be solved is "how to increase the primary school teachers' pay suffi-

ciently to attract a better class of teachers, who will have their hearts in the work, and to prevent the leakage from the *guru*-training schools." In the Bengal districts of *Eastern Bengal and Assam*, things are no better, and the percentage of trained teachers is actually slightly lower than in Bengal itself (11 per cent. against 11·4). But the inclusion of *Assam* substantially increases the percentage. Great improvement is reported from the *United Provinces;* not only are trained teachers being supplied in greater numbers, but the type of man who presents himself for training is better qualified than was originally contemplated, and possessors of vernacular final certificates are obtainable even for aided schools. The *Punjab* leads the way in the matter of qualifications with 42 per cent. of its teachers trained. The *North-West Frontier Province* is close behind with 40 per cent. But, even in the Punjab, we are told the increase in the number of trained teachers has not kept pace with the increase of schools. *Burma* is ill-supplied with trained teachers; perhaps the utilisation of monastic schools acts as a hindrance. In the *Central Provinces* somewhat less than one-third of the teachers are trained, but steps are being taken which, it is hoped, will work a solid improvement.

Pay.

275. The average pay of a primary school teacher throughout India cannot be calculated with accuracy. But (still taking the figures for boys and girls' schools together) the total direct cost of primary education, divided by the number of teachers, works out to a little less than Rs. 10 a month. The figure in a board school is about Rs. 14 a month, in an aided school about Rs. 8, in an unaided school a little over Rs. 4¼. In order to rectify the figures, fees collected in board schools have been deducted (in those provinces where the teacher is not allowed to keep them) in the figures given here and in paragraph 280. The result cannot of course be taken as accurately indicating the average pay; something must be deducted for contingencies; on the other hand, the private teacher often receives gifts of grain and perhaps a free house—perquisites which do not show in the returns. Taking these points into consideration, it may be said that the monthly emoluments of primary teachers do not exceed the amounts shown above, the sum which must be deducted for contingencies being largest in the case of a board school, and practically *nil* in that of an unaided school. The pay of a board school teacher is ordinarily composed of a regular salary paid by the board. But, where board schools are few and aided schools are many, the system of payment in the former so far approximates to the latter that the teacher is allowed to retain fees. This is the case in elementary schools of Madras and Eastern Bengal. In Assam, too, fees may be retained up to a certain amount; but, as primary education is there free, this is of little moment. In the Central Provinces the fees are utilised by the school committee. In other kinds of schools the teacher's emolument depends on the fees he can collect, the grant he can earn (see paragraph 270) and such presents and privileges as the villagers provide. It is the existence of this last unreturned source of income that explains the otherwise incredibly low earnings of the unaided teacher.

276. The reports indicate that pay—at least in board schools—has generally risen. There has been a tendency to adopt a minimum rate. In *Madras* this minimum is Rs. 8; but in elementary schools fees are retained and a capitation grant is given, averaging Rs. 2. In *Bombay* Rs. 9 has been fixed as the minimum for assistants, save in Sind, where it is Rs. 10; Rs. 15 is the maximum; Rs. 12 and Rs. 11 respectively are the minima for trained and untrained headmasters. Certificates of training also bear certain face values, which, however, cannot ordinarily be given. To effect these improvements, a grant of nearly three lakhs recurring was made during the period. The pay of a trained headmaster in a local board school of Bombay appears to average over Rs. 18, in a municipal school over Rs. 26. The *Bengal* report gives some estimates of the pay of primary teachers; in the case of schools under private management it varies from Rs. 5·2 to Rs. 7·5, but is under Rs. 6 in six divisions. Here, where private management is the rule, payment in kind (not shown in returns) is probably more prevalent than elsewhere. One of the inspectors asserts that a considerable portion of the *guru's* income is derived from this source. In the *United Provinces*, as in Madras, the minimum has been fixed at Rs. 8—which, remarks Mr. de la Fosse, cannot be called an extravagantly high salary, but is far more than a large number of teachers were

receiving in 1907. In the *Punjab* the minimum initial pay is Rs. 15 in the case of a headmaster and Rs. 12 in that of an assistant. Compared with these rates, the incomes earned in *Burma* are high—in government vernacular schools the pay ranges from Rs. 20 to Rs. 80; and in aided schools (which form the great majority) the fee income in Lower Burma is not uncommonly Rs. 20 or Rs. 30 and sometimes rises to Rs. 75, though in Upper Burma it hardly ever exceeds Rs. 15. In the *North-West Frontier Province* a notable step has been taken in the formation, for certificated board teachers, of an elementary teachers' service, containing four grades on Rs. 14, 16, 18 and 20. A teacher is entitled to promotion (provided there is a vacancy) after five years' approved service in one grade; and a limited number of personal allowances of Rs. 5 have been instituted for teachers of long approved service. Men of long and successful service, who are now disqualified from admission to the normal school, are awarded special certificates and thus gain entrance to the service.

277. Besides his actual pay, it is possible to hold out other inducements to the teacher. The village school is the outpost of civilisation in remote places, and the schoolmaster is respected as the man of learning. He sometimes combines the office of branch postmaster with that of teacher and thus increases his slender pay. The reports do not show how far this practice extends generally, but several of them contain mention of it. In Madras the work is entrusted to government and local fund schoolmasters, of whom 521 are thus employed, on monthly pay varying from Rs. 2 to Rs. 12---in addition, of course, to their pay as teachers. The system works well; but it is observed that the percentage thus managed to the total of extra-departmental branch offices was only 35 in 1912 as against 43 in the previous quinquennium. In Bengal the number of schools in which a teacher is in charge of postal work has fallen from 602 to 532. While it is admitted that the additional duties tend to a certain interruption of school work, it is also observed that a little judicious arrangement can minimise the inconvenience; and one of the inspectors remarks, " I consider the expansion of the postal system as necessary for the education of the masses as the expansion in the number of schools; the former makes as much for their education as the latter, though indirectly, and I would therefore advocate the extension of the school post office system, even though the combination of schools and post offices may not, from the postal or educational point of view, be as efficient as a separate institution for each." The Punjab report speaks of allowances of Rs. 2 to Rs. 8 per mensem. In Eastern Bengal districts, there are 332 branch post offices attached to schools; in Assam the system appears to be almost non-existent. Throughout a long period of school inspection the present writer has found but one instance where postal work seriously interfered with teaching. The case was a peculiar one, where the village, though remote, was a large centre of local trade, shop-keepers formed the bulk of the population and the postal work was peculiarly heavy. Elsewhere, he has found that the two duties can be satisfactorily discharged together, and that the school which is also a branch post office is generally among the best conducted. The teacher is stimulated to effort by the desire to retain the extra emolument coupled with light work. It seems unfortunate that, at least in some provinces, the extent of the practice has been diminished.

Postal work.

278. In some provinces an additional and deserved attraction is held out to teachers in the shape of the exemption of their children from the payment of fees. The *Bengal* code permits the son of a teacher in a government school whose salary does not exceed Rs. 50 a month to read free in the school in which his father is employed, and a second son may read at half rate. The same privilege is extended to government pensioners of the education department whose pension does not exceed Rs. 25 a month and to the orphans of officers who died in the service of the department or of pensioners. In the *United Provinces* teachers in government service drawing less than Rs. 50 a month pay one-half of the usual fee for their sons or dependent relatives, and aided schools may allow the same concession. In the *Punjab* the teachers in any recognised school whose salary does not exceed Rs. 30 a month may educate their children free in vernacular schools and vernacular departments of secondary schools. In the *Central Provinces* the sons of teachers of schools

Education of teachers' children.

under public management and likewise of inspecting officers and of deceased or pensioned teachers may read free in publicly managed schools. In *Eastern Bengal and Assam* the same privilege is extended as in Bengal.

Provision for old age.

279. Perhaps no method of enhancing his prospects would prove so acceptable to the primary teacher as some provision for his livelihood in old age. Teachers of board schools have this privilege to a considerable extent. In *Bombay* their service is pensionable. The same is the case in *Berar;* and it is now proposed to make pensionable the service of all primary teachers throughout the *Central Provinces* who draw over Rs. 10 a month. In *Madras*, board teachers are required to contribute to the provident funds established by the boards; and it is noteworthy that such a teacher may continue so to subscribe even if his school becomes an aided school, provided his fixed pay is over Rs. 10 a month. Board and municipal teachers of the *United Provinces* who draw Rs. 10 or over are required to contribute to provident funds; and board teachers in the *Punjab* of the same minimum pay are similarly admitted, while many municipalities in that province have started funds. In *Burma* municipal school teachers are required to subscribe when the municipality maintains a provident fund. These concessions have not been made in the *Bengals* or in *Assam*. So much for teachers employed by local bodies. But the same is not the case with those in privately managed schools. There are perhaps few measures which would so surely improve the staff and tone of these institutions as the institution of provident funds. Some of the present proposals regarding provident funds in private schools of primary and of higher status have been mentioned in paragraph 43.

Comparison of training and pay in provinces.

280. The remarks which have been made regarding qualifications and pay in the preceding paragraphs are now brought together and summarised. The percentage of trained teachers to the total in different provinces is shown below, as also a very rough calculation of the average emolument based on the cost of primary education *minus* fees in board schools which are credited to the boards.

Province.	Percentage of trained teachers to the total.	Average emolument of teachers per annum.
Madras	36·0	104·3
Bombay	32·0	274·2
Bengal	11·6	77·6
United Provinces	31·4	108·3
Punjab	42·0	155·5
Burma	18·1	94·2
Eastern Bengal and Assam	15·9	80·6
Central Provinces and Berar	27·9	161·9
North-West Frontier Province	40·2	171·7
AVERAGE	24·8	117·0

The data of past years are insufficient to permit of any general comparison of qualifications further than what has already been indicated.

The accuracy of the calculation of pay is impaired by the considerations already explained. Roughly, however, the fact that the annual cost of a boys' primary school has increased by Rs. 29 on the average throughout India during the quinquennium shows that the pay of teachers must have substantially risen. In institutions under public management the increase has amounted to an average of Rs. 51 a year. But the table sufficiently indicates the poverty and the inefficiency of schools over large tracts of the country. In the provinces where all or most of the schools are left to private management, the proportion of trained teachers and the pay offered are deplorably low. In both respects, Bengal displays the poorest figures. The existence of a certain number of board schools renders the condition of Eastern Bengal slightly —but only slightly—better. Burma, wholly dependent on privately managed schools, is next upon the list. Madras, with its mixed system, is fairly successful in training its teachers, but offers low pay—a fact partly explained by the cheap rates which obtain in that presidency.

VII.—Courses.

281. The primary curriculum comprises vernacular reading, writing and arithmetic, generally including the reading of manuscripts, the writing of letters and a certain amount of mental calculation, which is much appreciated. Physical exercises are also compulsory, save in Burma. Object lessons are almost everywhere given, drawing generally and other forms of manual instruction seldom. Lessons on nature study (centred round the field, the crops and the cattle), the study of the village map, the records of the *patwari* or village accountant, some form of simple mensuration, and the method of keeping and checking household or shop accounts are generally included in the curriculum, partly as an intellectual training, partly with a vocational object. Some very simple instruction in hygiene and science is frequently included in the general reading book or in the object lessons. Simple geography is almost always compulsory, stories from history usually but not invariably form a compulsory or an optional subject. Second languages are prescribed only in Madras, the Punjab and Burma. In Madras schools, English, which is very largely used in that presidency, may be taught; in the Punjab Persian is occasionally included in the course for rural schools; and monastic schools in Burma take Pali. Such is the main outline of study. It is not a matter of great importance whether a subject is taught separately or as part of the reading course. Sometimes more noteworthy distinctions are introduced by the modification of the ordinary course to suit indigenous schools such as *maktabs* or *pongyi kyaungs*. Here secular instruction is more or less confined to the ' 3 R's ' with perhaps physical training and a few other simple subjects; but the curriculum does not ordinarily permit of such luxuries as geography and history. Another source of variation is the occasional distinction between rural and urban curricula. In some provinces, such as Bombay, there are special rural schools and a village school need not necessarily be of the ' rural ' type. Their organisation and the difficulties which attend them are alluded to under another subject (see paragraph 304). In the Central Provinces the village school offers a double curriculum —a simple course for all, and further instruction in such subjects as geography and arithmetic for those who are not half-timers, but return to school after the mid-day recess. And, both in the Central Provinces and elsewhere, there is generally some difference between the subject matter of certain parts of the instruction in village and in town schools—those subjects peculiarly suitable for agriculturists being omitted in the latter institutions and replaced by more advanced teaching in other branches. This difference can best be illustrated by the reproduction of a monograph on the subject written by Rai Sahib Lala Sundar Das Suri, inspector of schools in the Multan division of the Punjab. It figures in volume II as appendix XVIII. *The subjects taught.*

282. Rather than detail the subjects in each particular province, it is proposed to show the general trend which has recently influenced Local Governments in modifying the primary courses. Briefly it may be said that the education imparted aims at instilling a knowledge of the ' 3 R's,' at stimulating thought and observation and at fitting the pupil for life both by the opening of his intellect and by the acquisition of some practical ability in matters which will be of material use to him. The curricula may be said to be more or less uniformly fixed with this goal in sight. The changes made are not so much in subject as in subject-matter, in the nature of books prescribed and in the methods which the master is exhorted to pursue. The traditional ways of rote teaching are to be abolished; new methods of rational teaching are to be introduced. The stumbling-block is the inability of the teacher; and one province differs from another mainly in the degree to which they risk failure in incompetent hands. Mr. Orange, when pointing out this fact, took as examples Bombay satisfied with its established scheme, Bengal admitting failure in an ambitious curriculum, and Madras recently entered upon a new attempt. *Changes in the quinquennium.*

283. The results of the *Madras* scheme are thus described by Sir A. Bourne :— (*a*) *in Madras.*

" Strictly speaking this scheme makes no subject compulsory, but the following subjects are recommended as desirable for all schools. The vernacular, space and number work, general knowledge, drawing, recitation with appropriate ragams, *i.e.*,

singing, and physical exercise. Instruction may also be given in any of the following: English, geography, civics and Indian history, nature study and elementary science, Hindustani or any South Indian vernacular in addition to the pupils' mother tongue.

The names of the subjects intended for all schools are self-explanatory, except perhaps general knowledge. This comprises the simpler parts of nature study, geography and civics as these are understood in elementary schools, and simple and important rules of health and conduct. In particular pupils should be able to point out on the village survey map any particular field and its boundaries, to calculate *kist*, to know what a *patta* means, to know how to *durkast* (apply) for waste lands, how to relinquish land, how to apply for change of registry, and how to apply for remission.

The underlying idea of the scheme is that schools should give the pupils that training that their parents' circumstances and their own prospects call for. It recognizes the necessity of acquiring the arts of reading, writing and ciphering, but it seeks to make their acquisition subserve the purposes of mental training. It adds drawing, not so much as an end in itself as because it is a means of expression and is also a valuable mental and physical discipline. The knowledge sought to be imparted is that likely to be useful in after-life and is of a kind that closely unites the pupil's school with his home life. In so far as his range of knowledge is extended by study of any of the additional subjects the relation of it to his life is similarly kept in view.

The methods of teaching recommended are realistic and practical. The lower classes should be kindergartens, in the higher full use must be made of apparatus and illustration and everything must be done to prevent school work degenerating into a monotonous routine.

The change sought to be effected, however, is not only of curricula and methods. The scheme of studies also contemplates a more elastic classification or grouping of pupils than the rigid yearly standard system. Promotions may be made more frequently than annually. No special portion of the work is prescribed in any grade for any particular year or standard, as the amount accomplished each year will necessarily vary according to the circumstances of the school. It is for the inspecting officers to see that work given for any particular class or group is suited to the capacities of the pupils.

> The great work of the quinquennium in elementary education has been to bring the schools gradually nearer to the ideal put forth in this scheme. The inspecting officers have been warned not to force the pace. It is no part of their duty to try to make teachers do what they are obviously unfit for. For the most part the older men have to be allowed to go on in their old ways, only conforming to the scheme so far as they are able to understand it. The younger men, especially those who have been trained in recent years, understand it better and the inspectors express themselves as not dissatisfied with the progress that has been made. It is not surprising that parents should be slow to understand the new system, and should be opposed to 'play schools,' but often when they can be got to come to the school and see what is really being done they become warmly interested in it. Perhaps there is a danger lest the ordinary school arts of reading, writing and ciphering should be neglected in favour of more showy subjects that it is easier to pretend to teach intelligently, particularly as the teacher has no longer the examination for results grants to give an artificial value to his work."

(b) in Bombay.

284. The curriculum in *Bombay*, as in most other provinces, is fixed, most of the subjects being compulsory. Its general aim, as described in the last review, is to develop the power of observation and reasoning instead of merely forming the memory. Mr. Karandikar speaks favourably of the work done by the majority of the trained teachers, and also some of the untrained. A new feature has been the introduction of agricultural readers. It is early to judge of the results; but reports indicate that the agriculture teaching is not practical and is only waste of time.

(c) in Bengal.

285. The system introduced into *Bengal* in 1901 depended on Froebelian methods in the infant sections and the substitution in the lower primary classes for the ordinary reading book of a science primer containing lessons on botany, natural history, agriculture, physics, chemistry, hygiene, and domestic economy. The lessons on agriculture were to be read by boys in rural schools in place of physics and chemistry, which were for urban schools. Hygiene was for boys; domestic economy for girls. Arithmetic, object lessons, drawing and optional manual work of a very simple kind formed the other principal subjects. In the upper primary course, historical, geographical and literary readers were added, and science readers of a wider scope were prescribed. This curriculum was to be imparted, as pointed out in the report for 1907, by 50,000 teachers, the accomplishments of the majority of whom might be described as an ability to read, write and do a little arithmetic. The scheme failed; for the Froebelian spirit was not really introduced; the

children now merely memorised the science readers instead of the old reading books; reading about objects was substituted for study of the objects themselves and the faculty of observation was not developed; undue prominence was assigned to science, which is not a suitable subject through which to introduce a child to a knowledge of his mother tongue; and the readers produced were not good. Neither of the Bengals was satisfied with the 1901 curriculum.

286. In Bengal the operations of revision commenced with a series of committees, of which the first was called after the publication of the Government of India resolution of March 1904. This committee condemned the curriculum of 1901, and recommended that the lower primary school should offer a simple course suitable for agriculturists, the daily period of instruction not necessarily exceeding three hours. The findings of this committee were referred to a second committee which sat in 1905 and made somewhat different proposals—a half time system resembling that of the Central Provinces inasmuch as those who read the shorter course would attend school only once a day and learn the '3 R's' and simple facts relating to agriculture and village life, but differing from it as regards the subjects relegated to the whole-time course, namely, the training of the senses, drawing, drill and manual exercises. A third committee was then appointed to draw up the curriculum for rural schools—the only class of school affected by these proposals. This committee could not regard as sound the lines on which they were instructed to work. In the first place, the training of the senses appeared peculiarly essential for the children of agriculturists—a fact realised in the Central Provinces curriculum; a syllabus which confined itself to the '3 R's' would not make intelligent cultivators or train the pupils to be 'observers, thinkers and experimenters in however humble a manner.' In the second place, they held that the defects of courses and text-books applied as much to urban as to rural schools, since the same principles hold in both cases. The syllabus produced was accordingly intended to embody these principles in both cases and insisted on observation as a compulsory element. It was for adoption only in the elementary stages—the two infant classes and the first and second standards. In the former are taught accurate observation and expression, colour, form, number, reading and writing, nursery rhymes, action songs, games and free physical exercises. In the standards, the compulsory are reading, writing, spelling, arithmetic, drawing and modelling, nature observation lessons, hygiene, and (in the second standard) poetry and geography, *i.e.*, the observation of the chief physical features of the actual surroundings. The optional subjects are elementary drill, hand and eye training, including drawing, and further arithmetic and observation work. Teachers' manuals and literary readers were produced to carry out this curriculum. It was published in 1907 and followed at the lower primary scholarship examination of 1911. The upper primary and middle curriculum (standards III to VI) was published in 1909, and its study was to commence in 1911. Apart from English, which is to be taught largely by the conversational method, the course consists of vernacular reading (the text-book mainly comprising biographies, moral tales and sketches of natural history relating to Indian fauna), arithmetic, based on the comprehension of problems, science, hygiene, history, geography, drawing, geometrical drawing and experimental geometry, mensuration, drill and manual work. No difference is made between urban and rural schools and the only difference between the vernacular school and the primary and middle stages of an English school is that the time devoted to English in the latter is spread over other common subjects in the former and utilised for mensuration, the study of which is confined to vernacular schools. A difference is made between boys' and girls' schools, domestic hygiene and needlework being included in the course for the latter, while the geometrical subjects and mensuration are omitted. The science teaching is confined to natural phenomena and plant and animal life. The instructions regarding the first are as follows :—

"Continually greater stress should be laid on the keeping of a calendar in which all observed natural phenomena should be recorded. Now that the children are supposed to have learned to write, they may be asked to bring written record of their individual observations. All such observations should be recorded, and possibly the name of the individual observer, in order to endow the calendar with particular interest.

No effort should be spared to give it a permanent character, and it should be shown to, and initialled by, inspecting officers. Special attention should be given to meteorological conditions, and a school observatory might gradually be begun. The points of the compass must be discovered by observation of the sun. Each succeeding class must do this for itself independently, by erecting a vertical stick on a carefully flattened and smoothed portion of the school compound, and marking the shadow of its end at different times of the day. Having thus discovered the south, the other points of the compass should be marked on the ground and named. Then the position of the sun at rising and setting must be marked down every day, or noted particularly once a week, so that its gradual seasonal change may be noted. The varying height of the sun at noon should also be observed and noted. Thus a sun-dial is constructed and its uses explained. When the apparent motions of the sun are thoroughly known, they may be contrasted with those of the moon whose regular study is, however, rendered difficult by its irregular hours, and it should perhaps only be attempted by schoolmasters who can arouse such enthusiasm that the children will volunteer to take turns at evening and early morning observations, and then relate the results to their class-fellows; these results should always be recorded in the calendar. The direction and force of the wind should be noted with the help of a streamer attached to a tall stick, and a locally-made rain-gauge kept, and the collected rain measured in the presence of the whole class. All these measurements—especially those connected with observations of the sun—will serve as practical illustrations of elementary geometrical drawing and measurement. Measurements of the length of straight and curved lines—every child being provided with a foot-ruler marked with scales of inches divided along one edge into 10ths and along the other into 16ths. Measurements of areas and volumes by every member of the class."

A method of observation is also to be pursued in geography and hygiene. The effects of this change have still to be seen.

(d) in Eastern Bengal and Assam.

287. In *Eastern Bengal and Assam* a committee after prolonged deliberations framed a course largely dependent on object lessons correlated with reading, arithmetic and drawing lessons. The number of books required for the pupils was to be reduced to a minimum and manuals were written for the teachers. The scheme was published two years before its introduction in order to allow time for changes in the training schools, the preparation and study of manuals, etc. The most recent administration report of Bengal describes it thus :—

"In Eastern Bengal a new curriculum for primary schools came into force on the 1st January 1912. It was drawn up after much discussion by a committee of official and non-official gentlemen. The course of study is designed to teach the pupils to think for themselves, to train their powers of observation, and to impart practical knowledge that will be of use to them in their every-day life. It will not lead the village boy to think that the pursuits of his father are derogatory and to be avoided, but will train him to follow his hereditary calling with greater intelligence and thus to improve his material and moral condition. The subjects will be more interesting, more familiar to the children and better adapted to rouse their intelligence. A distinction is made in the curriculum between rural and urban schools. Stress is laid on practical work in the school garden with a view to early training in the operations of agriculture. In fact the introduction of nature study has been one of the greatest reforms of the primary school curriculum. The number of classes has been diminished, while at the same time the lower primary course has been made, as far as possible, self-contained for those pupils whose circumstances will not admit of their studying to the end of the full course."

Of the prospects of this scheme, the report says, "It is impossible to say how far the new curriculum is likely to accomplish its object, as it came into force only on the 1st of January 1912; but it is to be feared that, as with the curriculum which it replaces, the want of qualified teachers will prove a stumbling-block. There can, however, be no doubt that it is a great advance upon the old curriculum and that, if competent teachers were available, it would be more successful."

(e) in the United Provinces.

288. In the *United Provinces* there has been no change. "The curriculum," says Mr. de la Fosse, "is practically identical in rural and urban schools, the only difference being that drawing and object lessons are made compulsory at an earlier stage in urban schools. The majority of the boys attending both kinds of schools belong to the same class, *viz.*, the literary castes, and require the same kind of instruction. Moreover, the staple of education in our elementary schools consists of the three R's and these are as necessary to the village boy as to the town boy; for it is, or should be, the object of all to be able to read, write and reckon. Similarly simple drill and physical exercises are suitable for all classes of scholars. It is possible to

adapt object lessons to the different types of scholars, but they hardly count as a means of differentiation." The following remarks are of interest:—

"Suggestions have been made from time to time by persons interested in the education of the masses, but not themselves directly concerned with it, for making the courses of study more useful and thereby rendering primary instruction more attractive. The question was first raised in the Legislative Council by a non-official member, whether it would not be well to introduce into the curriculum subjects more closely related to the every-day life of the people, and after some discussion there it was referred to the committee on rural education, mentioned above. There are two schools of thought—outside the department—wide as the poles asunder, in regard to what elementary schools should teach: one set of opinion would utilize the schools for the dissemination of useful information, on such subjects as agriculture, sanitation, malaria, plague, hydrophobia, snake-bite, rent and revenue law, co-operative banking, the silk industry, and even the state of the yarn-market; the other would confine instruction strictly to the 'three R's,' not even admitting drawing or clay modelling, observation lessons or geography. Amidst the bewildering multitude of counsellors the department has kept on its course undisturbed, holding fast by the guiding principle that a school is first and last a training ground of faculty and that nothing which cannot be made to minister to that purpose has any claim to admission into its courses of instruction. That in refusing to turn aside it has satisfied neither party goes without saying, and that not a few hard things have been said about it was to be expected; but the enthusiasts for useful knowledge are apt to forget that, just as you cannot pour a quart of liquid into a pint-pot, there is a limit to the amount and nature of what can be stuffed into a child's head. On the other hand the 'three R's' are not in themselves a sufficient training for the intelligence. The powers of observation and reasoning need to be cultivated, and no harm will be done by using things of every-day life for observation lessons and by training hand and eye by means of simple drawing and modelling. A little 'local geography' too will help to quicken a child's interest in its surroundings. It is alleged that the country folk object to their children spending time at school on studying anything but the 'three R's'; but their real objection is not to their learning other things, but to the poor results of the literary instruction given. If by awakening the intelligence generally the child's progress in its studies were accelerated and its memory made more retentive, there would be less indifference to education on the part of the people."

Some change, however, is contemplated. The question "whether a directly rural and even agricultural bias could be given to elementary education with a view to rendering it alike more attractive and more useful to the cultivating classes was taken up by government in 1909 and a special and representative committee was appointed to investigate the matter, to undertake the preparation of a new series of readers and draw up a syllabus of object lessons for use in primary schools. The committee has met several times, passed many resolutions, done a good deal of work through its sub-committees, and has submitted to government a syllabus of object lessons suitable for introduction into primary schools. It has also proposed certain modifications in the curriculum. But its work is still unfinished and none of its recommendations has yet seen the light."

289. The *Punjab* offers a plain curriculum, which includes object lessons (*f*) *in the Punjab.*
and (in the fifth standard) hygiene, but excludes history and (till recently) drawing and manual training. Mr. Godley says:—

"At the close of the period under review a simplified course of study suitable for all village schools was prepared, on the lines of the rural school curriculum. The general adoption of this course will dispense with the necessity of retaining a separate class of 'town' schools as distinct from the anglo-vernacular departments and branches of secondary schools. The weakest features of the teaching in village schools have been, as before the modern innovations, book-keeping, land records, pra tical mensuration, and object lessons, especially the last-named. The Delhi inspector says: 'A few schools have small gardens containing plants included in the syllabus, but attempts are seldom made to demonstrate the lessons by means of fresh plants and living animals. Half the lessons selected for each class are on the objects peculiar to the locality, so that the teachers may have no difficulty in collecting materials to illustrate them, but this principle is not well understood. For instance, the lessons on plants, flowers, and fruits are not always taught during their season, and the order of the list is slavishly followed.' The Jullundur inspector says: 'I notice the same grotesque object lessons, the same unreal teaching of arithmetic, the same formal map-drawing and map-pointing in geography, the same sing-song recitation, and the same indifference to practice in speech that marked the teaching four years ago.' Mensuration is sometimes well taught where an itinerant *girdawar* is employed. The Rawalpindi inspector discerns an improvement in the teaching generally, but the common impression seems to be that pro-

gress is held back by the incompetence of a large number of teachers, although there are, of course, bright exceptions."

(g) in Burma.

290. The *Burma* curriculum was published in 1903-04 and has undergone only minor modifications. It has to offer adaptations for monastic schools and is peculiar in leaving physical instruction an optional subject. Mr. Covernton says :—

"In its present form it comprises, as compulsory subjects, Burmese (or other vernacular), arithmetic, object lessons, geography and certain kindergarten occupations. Monastic managers who, on 'conscientious grounds,' object to the two last are permitted to dispense with kindergarten and to take Pali in lieu of either object lessons or geography. Schools which take this curriculum are classed as 'A' schools, and are required by the code (though the requirement has not been severely pressed in practice) to take an optional subject, *e.g.*, drill, drawing, manual training. Schools, however, which cannot cope with this curriculum may be enrolled and aided as 'B' schools, for which no detailed courses are prescribed by the department, managers being required only to teach the '3 R's' to the satisfaction of the deputy inspector. It was hoped that the provision for 'B' schools would attract a considerable number of unregistered monastic schools. The total number of 'B' schools on the register is 576, of which 362 only are monastic. As the inspector of schools, Irrawaddy, writes, '*Pôngyis*, for whom it was chiefly intended, do not care to be classed as managers of inferior public institutions.' At the same time if they cannot grapple with the 'A' curriculum they should not expect to receive the 'A' grants or status."

(h) in the Central Provinces.

291. The characteristics of the *Central Provinces* curriculum are the simplified half-time system, the stress laid (in rural schools) on nature study, instruction in the village map, mental arithmetic problems and other utilitarian subjects, and the universal teaching of *deshi kasrat*, a system of indigenous exercises, which, first organised in this part of India, has now spread to other provinces. Mr. Wright says :—

"The character of the schools is on the whole very good. The curriculum is not altogether satisfactory, but is under revision. The worst feature of the past has been the poor quality of the text books, both in subject-matter and language. The provision of good books has been taken up and will be carried through as speedily as the arduous nature of the task allows. Apart from purely literary work much attention is given to practical knowledge of *patwari* papers and other matters of village economy. School gardens are almost universal, and are useful in some places to the adult villager as well as the schoolboy, as forming an experimental or demonstrative plot for the growth of new vegetables, etc."

General remarks.

292. In conclusion, Sir A. Bourne's warning (quoted above) is to be remembered regarding the danger that the '3 R's' may be neglected. The injunction is no doubt a wise one that the pace must not be forced. The teaching staffs (especially among the privately managed schools of the Bengals) are not competent to swallow new methods wholesale; and the effect of the curricula adopted in those provinces (or as finally arranged for the new presidency of Bengal and the province of Bihar and Orissa) will be watched with interest. The very shortcomings of the staff—to be deplored in most respects—may have one advantage—that there is not likely to be any excessive reaction against the due utilisation of the child's facile memory, which the ultraprogressive educationist is sometimes inclined to ignore in favour of exclusively rational methods, thus assuming an amount of reasoning power which the child does not possess and which must be developed *pari passu* with the attainment of elementary knowledge.

Manual training.

293. It will have been observed that manual training is sometimes prescribed as a subject in primary schools. The training is necessarily of an elementary nature—drawing, paper-cutting and clay-modelling. In two provinces, however, there has been a further development. In the Punjab the elementary industrial school can hardly be distinguished from a primary school save in the addition of industrial subjects. Mr. Godley remarks that now that manual training is coming to be regarded as a part of general education the separation of schools which include it into a distinct class particularly intended for artisans' children has ceased to have much significance and may lead to confusion. In the report of the committee alluded to in paragraph 40 industrial schools of the Punjab are described as giving instruction in the ordinary literary subjects taught in primary or middle schools and also in carpentry or metal work or both. The course in carpentry begins with elementary carving and carries the pupil up to the construction of simple articles

of furniture. The teaching in metal work is generally confined to the making of simple tools, etc. About the end of the quinquennium the Local Government proposed the appointment of a special instructor in manual training who would organise the classes on modern methods and train up teachers for the schools. The Government of Madras has also proposed the appointment of two instructors in this subject. The Government of Burma, too, has as a result of the conference of 1909 sanctioned the establishment of manual training classes in selected vernacular schools, the revision of grants for this subject and the training of the vernacular teachers at the Government Sloyd school at Moulmein. At certain anglo-vernacular schools too and at the government normal schools there are Sloyd classes.

VIII.—Free and compulsory education.

294. During the quinquennium, elementary education was made compulsory in the State of Baroda, and the question was keenly debated of introducing compulsion into British India. On the 19th March 1910, a resolution was moved in the Imperial Legislative Council in favour of free and compulsory elementary education. The motion was withdrawn. On the 16th March 1911, the Hon'ble Mr. Gokhale introduced into the same Council a private Bill " to make better provision for the extension of elementary education." The measure was a cautious one, and made permissive the introduction of compulsion. First, a certain percentage of boys or girls was to be already at school in a municipal or board area before the provisions of the Act could be applied to that area; the percentage was to be fixed by rules made by the Governor General in Council. Second, the municipality or board might, when this condition was fulfilled, apply the Act to the whole or any specified part of the area within the local limits of its authority; but it was not to be incumbent on the authority to apply it. Third, even when the condition of school attendance was fulfilled and the local authority desirous of applying the Act, the consent of the Local Government was necessary before this could be done. Wherever the provisions of the Act were in force, it should be incumbent on the parent of every boy, not under six and not over ten years of age, residing within that area, to cause him to attend a recognised school for elementary education on a number of days and for periods to be prescribed by the department of public instruction. Ample provisions were added for exemption in individual cases; and the Local Government might further exempt particular classes or communities from the operation of the Act. No boy, required to attend school, should be charged any fee if his parent's income did not exceed Rs. 10 a month; and other remissions of fees were allowed. Wherever the Act had been made applicable to boys, it might also be made applicable to girls. School attendance committees were to be appointed, whose duty it should be to lodge complaint, after warning, against parents of defaulting boys before a magistrate. The magistrate was to enquire and direct the parent to make the boy attend. If this direction were disobeyed, the parent was liable to a fine not exceeding Rs. 2 for the first offence and Rs. 10 for repeated non-compliance. The municipality or district board having jurisdiction over an area where the Act applied was to provide such school accommodation as the department considered necessary; and to this end it might, with the sanction of the Local Government, levy a special education rate. But the Local Government was also to share in the cost, the proportion to be met by local and provincial funds being prescribed in rules to be made by the Governor General in Council. Such were the main sections of the Bill; others dealt with child employment.

Mr. Gokhale's Bill.

295. The Council concurred in the introduction of the Bill, and opinions were invited. A year later Mr. Gokhale moved that the Bill be referred to a select committee. He explained that thirty-three per cent. of the children of a school-going age should be the proportion actually at school before any local body should be permitted to take up the question of compulsion, and that the proportions in which local bodies and government should share the expense of the scheme should be one-third and two-thirds respectively; he also proposed that, where education was compulsory, it should likewise be free. The debate extended over the 18th and 19th of March 1912. Mr. Gokhale based

his position on the fact that, while government was committed to a policy of mass education, progress under a voluntary system was hopelessly slow. He regarded the opinions expressed on the Bill as favourable, and the opposition to it as largely from official quarters. He did not consider the cost insuperable. Reckoning the male population as 125 millions and taking 10 per cent. of it, he found that, of the $12\frac{1}{2}$ millions to be educated, four millions were already at school, and the cost of educating the remainder, at Rs. 5 per head, would be at most $4\frac{1}{2}$ crores of rupees, of which government would have to find three crores, and another crore for girls. He suggested the reform might be carried out in ten years, and that the cost might be found by raising the customs duty from 5 to 7 per cent., which would bring in approximately 4 crores (nearly £2,700,000). The Bill was officially opposed on the grounds that there had been no popular demand for the measure, that the Local Governments were opposed to it, and that the weight, though not the majority, of non-official opinion was also hostile, while the idea of additional local taxation was strongly opposed. It was pointed out that the analogies of Japan, the Philippines and Ceylon, on which reliance had been placed, were misleading; also that the compulsory system in Baroda was regarded, in the reports of the State, as still in the experimental stage, that the incidence of the fines there charged for non-attendance was double the incidence of primary school fees in British India per head of the population, and that the percentage of literacy had remained far lower than in the neighbouring British districts where there was no compulsion. The estimate of the cost was too low—about half what it should be—and would provide only inefficient schools and a short course, while nothing was allowed for improvement and for other branches of education. There was still room for the voluntary system, the extension of which would be checked by compulsion in more advanced areas. The average annual increase of pupils during the last four years had been nearly a quarter of a million. The expense would be prohibitive and unfair in its incidence. The attendance committees would be ineffectual and the creation of any machinery would lead to general hostility. The Bill was described as premature and calculated to throw back the cause of elementary education. The further progress of the Bill was finally negatived by 38 votes to 13.

296. The justification of a measure of compulsion may be said to depend upon the benefit which that compulsion will confer upon the masses. The commodity must be sufficiently good to be worth having; the social conditions must be such as to create a genuine demand. Elementary education in India still awaits many improvements which only increased expenditure, more thorough supervision and easier methods of communication can effect. The acquisition of learning is not a hereditary tradition with the bulk of the population, nor (among an almost wholly agricultural and rural community) does it present a necessary condition to comfort and even prosperity, still less (as in industrial countries) to the bare maintenance of existence. Moreover, the caste system and the almost complete illiteracy of women act as serious obstacles. During his budget speech in the House of Commons on July the 30th, 1912, Mr. Montagu paid a tribute to the aims of Mr. Gokhale, but was unable to share his view that primary education as it exists at present in India is sufficiently valuable to force it on the whole school-going population as soon as possible. He pointed out that the greatest expansion of education can be secured, not by making it free or compulsory at once, but by the improvement and multiplication of schools. "Compulsion really can only be worked where education is popular and where, therefore, the need of putting compulsion into force would not show itself to the very large bulk of the population. There is not much use in applying it to resentful districts." In conclusion he quoted the opinion of the Maharana of Rajpipla—a progressive ruler who has done much to advance education in his State :—"Make primary education as free as you choose, add as many further inducements as you can; but do not make it compulsory. In the case of the most advanced classes it is absolutely unnecessary, and would serve only to create irritation. In the case of the poor 'backward classes' it would inflict harm where good was meant, would subject them to great harassment, would be positively cruel and unjust, and would be deeply though silently resented as such."

297. As regards free education, it has already been observed that the average annual fee in a boys' primary school is $14\frac{1}{2}$ annas. The average paid in different provinces is shown below :—

Free education.

Province.	Average fee annually paid by a pupil. Rs. A. P.
Madras	0 11 11
Bombay	0 10 3
Bengal	1 7 10
United Provinces	0 4 8
Punjab	0 9 2
Burma	1 0 2
Eastern Bengal and Assam	1 3 1
Central Provinces and Berar	0 1 7
Coorg	1 1 11
North-West Frontier Province	0 4 8
AVERAGE	0 14 6

In 1902 the average fee was just over one rupee. In 1907 it sank to Re. 0-14-1. The comparative lowness of the rate in provinces where the board school system prevails is noticeable. During the quinquennium, the fee in public schools has fallen from Re. 0-7-4 to Re. 0-6-9; in aided schools it has risen from Re. 1-1-3 to Re. 1-3-1, and in unaided schools from Re. 1-2-8 to Re. 1-5-3*.

Ordinarily, the fee rate is graduated according to the class in which the pupil is enrolled. In the Punjab it rises from one anna a month in the lowest to five annas in the highest class. The rates, however, are rendered so fluid by the exemption rules that the only useful figure to consider is that given in the preceding table—namely, the average fee collection per pupil.

298. In the North-West Frontier Province primary education is free whether imparted in the primary school or in the lower stages of a secondary school. This change was introduced at the close of the quinquennium. In Assam the payment of fees in lower primary schools is voluntary. In the rural parts of the Punjab elementary education is largely free; the children of agriculturists and village *kamins* pay no fees and ten per cent. of the pupils may also be exempted on the score of poverty. In the United Provinces, where the fee rate is particularly low, large exemptions are permitted for the sons of agriculturists. The same is the case in the Central Provinces, which show the lowest rate in India—just over a penny halfpenny a year. In fact it may be asserted with fair safety that, with the exception of the two Bengals, where the aided school system prevails, elementary education is free for those who cannot afford to pay for it. In Burma, vernacular education can be obtained practically free owing to the existence of monastic schools; the high fee rate is probably due to the charges made in anglo-vernacular primary schools. It is to be remembered that the rates shown above include not only elementary, but also upper primary, classes, and in two provinces what would elsewhere be known as middle vernacular classes. When the pupils of these higher classes and also the children of the comparatively well-to-do are excepted, the rate payable by the majority must be almost negligible. Books and slates have to be purchased; but the books are generally cheap; and in some parts of India a prize-giving or local generosity often supplies these necessaries wholesale to the poorer children. The following passage from the Punjab report is of interest :—

"By way of obtaining some illustrative statistical evidence of what the fee-payments in village schools actually amount to, the inspectors were asked to send in figures relating to six typical village primary schools in each division, showing the number of fee-payers and free pupils and the average monthly realisations from fees. The statements thus compiled exhibit curious variations. One school, situated in the Dera Ghazi Khan district, contains 82 pupils, none of whom pay fees. Another, in the Jhelum district, has 90 pupils, of whom all but two are exempt. At the other extreme is a school in Sialkot, where 69 out of 87 pupils are fee-payers. In 22 out of the 30 schools cited the majority of the pupils pay no fees, and in 11 of them, numbering 582

* The returns show a considerable increase in the average fee in Burma, which is not explained in the report, but is possibly accounted for by the raising of rates in anglo-vernacular primary schools of certain districts.

pupils, only 43 are fee-payers, an average of 4 per school. Of the total number of pupils in these schools about two-fifths pay fees. The figures indicate that there are many localities in the Punjab where the payment of school fees is exceptional, and that the importance of the question, so far as this province is concerned, has been greatly exaggerated. The small payment made by some of the non-agriculturist parents merely represents a cess or rate such as is already paid by the agriculturists in another form, and is commonly levied in western countries from all classes of the community."

The same report says that no evidence is forthcoming to show that the levy of fees on the scale prevailing in that province (by no means the lowest in India) has had any effect in checking school attendance; on the contrary, the classes exempted from payment are the least ready to send their children to school.

299. In the debates on the subject of free elementary education which took place in the Imperial Legislative Council in 1910 and 1911, it was urged that, while total exemption was in itself desirable, it would be premature and impractical, so long as the demand for education was in excess of the supply and so long as the supply of education was limited by financial considerations, to remit fees and thereby *pro tanto* to reduce the funds available for its extension. Nevertheless, large as are the fee-concessions in the provinces, the Government of India has declared in favour of a larger extension of free elementary education and has made this one of the objects of expenditure from its recent grants.

IX.—Educational surveys.

The problem.

300. Perhaps the most important departure of the quinquennium has been the commencement of a systematic survey of each province for the distribution and increase of schools. In some provinces, such as the Bengals, the number of schools is already large for the area to be covered. But they are small institutions, often overlapping one another; their separate existence makes for waste of funds and inefficiency. They are frequently grouped in favoured localities, while other areas are left unprovided. Here the obvious policy is one of concentration—the opening of a large efficient school in the place of several small schools—and of redistribution—the establishment of new institutions in areas of the latter kind. The task is beset by an elementary difficulty—the supply of correct maps, especially in a country over much of which the vagaries of rivers are constantly changing the face of the earth. And care has to be exercised that a single school be not mechanically regarded as efficiently serving a group of closely situated villages when in truth the children would have to cross a deep water-cut or a morass in order to attend. Madras also is thickly schooled and so are certain portions of Bombay, where, for instance, the district of Broach has but seven villages of any size without a school. In other parts of India there is generally ample room for expansion, little for concentration.

Surveys in progress.

301. Orders on the subject of educational surveys were issued by the Government of India in 1911. The work is being pushed on. In Madras the director himself is undertaking the work. The Government of the United Provinces has decided that a comprehensive survey of the whole field of primary education shall be taken at once by a committee representative of official and non-official opinion. A detailed survey is being carried out in each district of the Central Provinces showing the villages, their population, the position and status of existing schools; the general principle will be the grouping of feeder schools round model vernacular middle schools subject to modification in view of local conditions.

The method pursued in Eastern Bengal.

302. But the labour of mapping alone is a long one; and it is yet too early to see the results. In Eastern Bengal, however, a survey was commenced in 1906 in connection with the proposal to establish board schools in those districts. (The problem did not arise in Assam, where the system of board schools already prevailed and where the two divisions possess only one school respectively for 16·3 and for 14·3 square miles.) The scheme is described in detail in a note printed among the proceedings of the Allahabad conference, to which is appended a specimen educational map of a district. It involved three processes—the concentration of grants in over-schooled areas, the construction of maps, and the establishment of board lower primary schools. The

first was necessary in order to render necessary schools more efficient and to save funds for the work of general expansion. As was to be expected, the carrying out of this part of the scheme was not unattended with danger and difficulty; and the report states that the spread of primary education was temporarily affected by drastic and indiscriminate action in several districts. Nevertheless, even after the withdrawal of grants from schools which overlapped with other schools, the distribution remains one school for every 2·3 square miles in the Dacca division, for every 4 square miles in the Rajshahi division and for every 3·5 in the Chittagong division. The next task was the preparation of maps. "Inspecting officers," says the report, "are prone to neglect the growth of schools where the population is comparatively depressed and where touring is a matter of great difficulty, and to congregate schools in the larger and more accessible villages." It was now decided to cover the country with a network of good schools, one in each *panchayati* union—equivalent in area to about nine square miles. A good aided school might, if well situated, serve as the union school. Otherwise a board school was established. Meantime, the aided school system was retained—save for the withdrawal of grants where schools overlapped—so that the board schools were linked up by a finer mesh of privately managed institutions. Finally, Mr. Roy thus describes the method of starting these schools :—

"The board, in consultation with the inspecting staff, decides what existing schools are sufficiently central and successful to justify their conversion into board schools, and where altogether new schools should be established. Programmes are then drawn up for gradual execution during a series of years. When the particular board schools that are to be established in each year have been selected, the first step is to obtain land for them. Proprietors or tenants are generally willing to hand over about half an acre of land to the board for this purpose. As a legal title is necessary, type deeds have been supplied to boards. In the case of tenants who do not possess occupancy rights the concurrence of the superior landlord has likewise to be obtained. For the erection of buildings a lump grant is annually made to each board on the assumption that each building will cost, approximately, Rs. 500. Some local contribution, however small, towards this sum is insisted upon in all but the poorest localities, and is as a rule readily given. When the scheme was initiated, a choice between a number of type-plans was given to the boards, in order to allow for diversities of local conditions. The material to be employed might be wooden frames and bamboo matting, mud or rough masonry, according to circumstances. The building rates again vary considerably. In some areas masonry plinths are possible; in others their cost is prohibitive. The roof is invariably corrugated iron, with a thick ceiling to reduce the temperature. The interior floor space is generally from 450 to 500 square feet, and there is always a small verandah in front. In some boards the work is done by contractors, but the best results are obtained where the villagers themselves erect the schools, since there is then no scamping and material is supplied at low rates. Some boards have found it worth while to employ a special sub-overseer for the supervision of these works."

In this manner, 1,345 new board schools have been opened, while in two divisions out of the three 658 good aided institutions serve as union schools. The total number of *panchayati* unions is 4,701. A substantial portion of the task has already been accomplished. The report pronounces the scheme a success. Had larger funds been available, progress would have been more rapid; for, as already remarked, the people are coming forward with offers of land and contributions far in excess of the number of schools which the boards can annually undertake. The result has been that while the total number of schools (board and privately managed) has only slightly increased, the number of pupils has grown by 142,597 and the number per school by 8.

X.—The education of those in employment.

303. Poverty, custom and the apparent inutility of education have combined to bring about the general employment of child-labour in India. This acts as one of the most powerful obstacles to the extension of elementary instruction. The difficulty and such remedies as have been attempted may be considered as they affect the child of the agriculturist or the labourer, the factory or tea-garden child and the employee of riper years. *Employment and education of children :*

304. The problem of the agriculturist's or labourer's child is at once the largest and the most difficult. The small boy is expected to help his parent at times of sowing, weeding and reaping, sometimes to tend the cattle perpetually and generally to do odd jobs about the house. It may be surmised (*a*) *of agriculturists.*

that the child, too, prefers these out-of-door and active forms of employment to the sedentary and monotonous confinement of a school. Apart from the prescription of a curriculum which the parent will consider useful and the child attractive, the obvious remedy is a half-time system which will provide a simplified form of instruction for those who must spend a portion of the day in the fields, release them from school in time to perform their labours and thus impart education without upsetting the immemorial domestic economy of a large fraction of the world's inhabitants. The system has been tried and has failed. Introduced thirteen years ago into the Central Provinces, it insisted on the attendance of the poorer children only for three hours at most in the early morning, and was undoubtedly beneficial for a time. But the last quinquennial review stated that its effect in overcoming the reluctance of parents had been small and that its introduction was unpopular in Berar, where parents are richer, readily permit their children to go to school and demand full value for their money. A somewhat similar experiment made in the northern division of Bombay in 1902 was entirely unsuccessful. Another attempt was made in 1909 in a few schools of that division. Here, however, it was confined to the busy agricultural seasons, and provided for attendance in the afternoon after the return of the children from the fields. This experiment likewise failed and was discontinued. "The fact is," says the inspector, "that if children are going to the fields, they go there for the day and cannot be induced to attend school that day." It is hoped that a satisfactory solution has now been found whereby the rudiments of knowledge may be rapidly diffused while provision is also made for higher vernacular instruction. Schools are to be divided into rural and full primary, the former being merely a truncated form of the latter with an identical course so far as the teaching goes. In the Punjab the half-time *zamindari* school was similarly unsuccessful, largely because the people would not accept a curriculum which did not enable the child to proceed further up the educational ladder. Such of these institutions as survived have been merged into the system of rural schools; and, in 1908, it was found necessary to link up the rural school, like its rival the town school, with the secondary school system, while retaining certain differences of curriculum. The following remarks of an inspector in the Punjab are significant :—

> "To the few agriculturists who wish their children to go out into the world, and therefore to proceed to a secondary education, the primary school is popular where it leads on to the middle course and unpopular where its curriculum is distinctively rural; but to the ordinary village agriculturist whose boy attends school for no reason in particular, or because he is asked to by the local lambardar, the school is equally complained of for unfitting its pupils for field life afterwards, and the rural school curriculum is merely a delusion and a snare. The conservative agriculturist is naturally averse to a schooling that seems to him to benefit the pupil only if he deserts his father's occupation."

The fact is that a curtailed school day involves a curtailed curriculum. The benefits derived from this are not obvious. It does not enable a boy to proceed to a secondary school. Nor does it provide the boy who wants only a vernacular education with sufficient knowledge or mental discipline to prevent his early relapse into illiteracy. So much for the rational objections of the parent. Further, there are powerful counter-attractions—the sunshine, the free life, the fascination of the hereditary labour in the fields, and the healthful weariness that it induces.

(b) of labourers, etc.

305. There are other types of labourers in the village—weavers, fishermen, tanners, scavengers, etc. Here the difficulties of early employment are enhanced by those of caste prejudice. The education of these sections of the community will be treated of—so far as it is capable of treatment—in the chapter dealing with depressed classes. But the following passage from the United Provinces report may fitly be quoted here :—

> "The school-going population has from time immemorial been confined to the higher or 'clean' castes, and the idea of throwing them open to the low castes has been repugnant to the Indian mind. But lately a certain amount of interest has been displayed in the depressed classes by leaders of opinion, but generally the interest has not got beyond academic discussion of the claims of all to education. Still the recognition of the right is something. This year, however, cases are reported of actual work being attempted in different parts of the province, more especially in Meerut and Dehra Dun.

The inspector thus describes the school he visited in Dehra Dun: 'Excellent work is being done and boys are all very keen. They come along as soon as their work is over and stay for about two hours. They are taught reading, writing and a little arithmetic. The schools are conducted by the Arya Samaj and, as far as I remember, there are about 150 boys in the three schools that are being maintained.' In Gorakhpur the district board have provided teachers (three appointed by the Salvation Army and two by the board) in five *dom* colonies. The *doms* are said to be much opposed to the education of their children, and the progress up to the present is meagre; but as the chairman remarks, 'they started as an experiment and may possibly prove the pioneers in low-caste educational institutions.' In Allahabad and Benares there have been meetings to discuss schemes for educating artisans and domestic servants' children, but subscriptions did not flow in readily and the promoters seem to be rather discouraged. They need not anticipate anything but sympathy and help from government should anything come of their efforts."

306. Compared with the problem of the preceding paragraphs, that of factory children is minute in size, but important by reason of the desirability of placing things upon a proper footing while they are of manageable dimensions in view of the possibility of a sudden industrial expansion. The Factory Labour Commission of 1908 did not consider that factory owners should be compelled to provide elementary education for the children employed, since education in India is not compulsory; but they thought everything should be done to afford facilities and that the only solution was the establishment of special schools for factory children at suitable centres close to the factories where the course of instruction would be repeated twice a day for the benefit of each set of half-timers and the maximum attendance for each set would be two hours. These special schools would have to be financed by the local authorities, but factory owners would probably assist. They also suggested that the child of thirteen years of age who could produce a certificate of proficiency should be permitted to work as a 'young person' if pronounced physically fit. Where industries are small and scattered, or where employment is of an intermittent nature, organisation is difficult. But the Government of India have urged the importance of adequate arrangements in larger centres, especially in cotton and jute mills, where it is probable that about 37,000 children are employed. Government, municipalities and mill-owners, separately or in combination, have opened schools at a considerable number of these centres—at Madras, Bombay, Ahmedabad, Hooghly, Cawnpore, Agra and Nagpur. Often the apathy or hostility of the hands acts as a check to attendance or quickly empties the school; and, where pressure is brought on children to attend by the mill-owner, the children sometimes leave the mill. Figures of attendance are available for four provinces, containing about half the children thus employed. About 16 per cent. of the children are at school. Disappointing as the result is, it is to be remembered that the percentage of those at school to the children of a school-going age of all kinds in India is but 1·7·7. The problem is a difficult one and calls for constant effort. *(c) in factory employ.*

307. There is another class of organised and concentrated employment on the tea gardens. These are situated chiefly in Assam. The question of the education of the children of the garden labourers has for some time attracted the attention of government; and certain of the employers have opened schools on their estates at their own expense. During the quinquennium, the Government of Eastern Bengal and Assam deputed an officer to enquire into the conditions of education. It was found that the majority of boys and practically all the girls grow up illiterate. It was suggested that managers should be offered the choice of schools entirely maintained by government, of aided half-time schools under the control of the employer, but open to regular inspection, and of unaided schools under the same management and open only to informal visits from government officers. A programme was drawn up, a financial scheme was framed and money was allotted. It is yet too early to judge of the success of these measures. But the report sufficiently indicates the difficulties that may be anticipated. Some of the schools which were established have already collapsed. In the Rajshahi division of Eastern Bengal a fair number of schools have been opened; but the attendance seems to be mediocre. *(d) on tea gardens.*

308. There are night schools for adults. They are intended to provide education for day-labourers who desire to extend the education they received *Night schools.*

as boys or to repair its omission. Ordinarily they are free schools conducted by the teachers of day schools who thus earn some additional grant. In some places, members of the police, *chaprassis* and domestic servants are reported as attending them. But, as pointed out in the Bombay report, they are most likely to succeed in industrial centres. Thus, there has been slow but steady increase in Bombay from 96 schools with 2,198 pupils to 101 schools with 2,571 pupils, and in Bengal from 733 schools with 13,728 pupils to 923 schools with 17,215 pupils. In Eastern Bengal and Assam, on the other hand, where there are few industrial centres apart from tea gardens, there has been decline; nor is this to be wondered at, since the report appears to indicate that the attendants are *raiyats*. The comparatively small increase in Bombay is attributed by one of the inspectors to the poor instruction and the non-payment of fees, and the report considers there is little future for such institutions. In the Bengal report the opinion of Rai Sahib Bhagavati Sahay (an additional inspector) is quoted to the effect that " so long as the labourer for whom this class of schools is intended can earn a decent living without education, there will not be any real demand for such schools; and a night school in the sense of a continuation school is out of the question so long as education is not regarded as an end in itself." A popular night class is attached to the industrial school at Lucknow and another, also fairly successful, to that at Gorakhpur. Perhaps their comparative popularity is to be partly assigned to the nature of the institutions to which they are attached; at Lucknow, in response to the request of the labourers, the workshops have been thrown open at night in order that the learners may study modern machinery in operation.

Continuation schools.

309. A special kind of institution is mentioned in the Bengal report—continuation schools for those whose education has been slight and who also desire instruction in technical and commercial subjects. Their number has declined; but they contain over 4,000 pupils; and government contributed nearly Rs. 13,000 to their cost. In addition to other defects, they have not been established at centres of trade and industry, and their condition is at present the subject of enquiry.

XI.—Middle vernacular schools.

Definition.

310. The middle vernacular school had its origin in the United Provinces, where it formed part of Mr. Thomason's system. It is a kind of glorified primary school, situated in a large village and continuing elementary instruction generally through two standards beyond the upper primary. The classification of these institutions is a difficulty. Under orders issued in 1883, they were placed among secondary schools; but, as regards both their character, their intention and their effect, they belong to the primary school system; and they are now classed as such in Madras and Bombay. They contain all the classes of the primary school in addition to the additional so-called middle classes. They carry the education of the village boy whose parents desire for him something better than mere elementary instruction, to a stage which will enable him to appreciate the literature of the vernacular and imbibe slightly advanced knowledge in geography, history and perhaps science. They produce the material from which are found the most promising teachers of vernacular institutions; in some provinces, indeed, they contain small training classes as well as classes of general instruction.

311. In the middle vernacular school the time of the pupil is not taken up, nor the continuity of his studies broken and retarded, by the necessity of learning a foreign language. In Madras and the Bengals indeed English is admitted. In the two latter provinces it forms a voluntary subject, the introduction of which was popular owing to the fact that the general curriculum was the same in secondary and in primary schools. The sharp distinction now drawn in Eastern Bengal and Assam between the courses in middle vernacular and middle English schools and the reservation of middle vernacular scholarships to schools of that denomination have largely reduced the numbers of those reading English in the former kind of school.

Number of schools and pupils.

312. Owing to the increasing popularity of English education, the gradual decline and final extinction of middle vernacular schools are commonly prophesied. Yet the number shows an increase—from 2,039 schools with

38,373 pupils in the middle stage in 1907 to 2,191 schools with 45,464 pupils in the middle stage in 1912. Of the schools, 929 are under public management, and 1,262 under private management. The increase of pupils has taken place mainly in the United Provinces and Burma; in Bengal and Eastern Bengal and Assam there has been a decline. On the whole, the average attendance at a middle vernacular school has risen and is now 94 against 90 in 1907. The increase in enrolment is shared by all provinces save the United Provinces, where (notwithstanding a large increase in the total number of pupils) the number per school has declined.

313. Expenditure has risen from nearly $12\frac{1}{4}$ to nearly $15\frac{1}{2}$ lakhs, out of which almost 11 lakhs is found from public funds. The average cost of a school is Rs. 705 a year and that of educating each pupil is Rs. $7\frac{3}{4}$. This rate of expenditure is unquestionably too low for a type of education on which the future welfare of all vernacular schools so largely depends. The middle vernacular school deserves every encouragement for the sake of the interest which it is capable of evoking in the study of the vernacular and the material which it supplies to the normal schools. *Expenditure.*

XII.—School age and literacy.

314. The population of the area covered by this report is now over 255 millions. The number under instruction is 6,780,721, or 17·7 of the population of a school-going age, if we reckon this as 15 per cent. of the total. But the figure of pupils includes those who are at higher institutions. In order to ascertain the number undergoing elementary education, it is necessary to calculate, not the total number of pupils, nor yet the number in primary schools, but the number actually reading in the primary stage whether of elementary or of secondary schools. The number of these in public institutions is just below $5\frac{1}{2}$ millions. To this must be added those who are reading in 'other schools,' since these are mainly primary, and also those in such private schools as give elementary instruction in the vernacular. The total will then be :— *The number of children under primary instruction.*

	Boys.	Girls.	Total.
In primary stage of public schools . .	4,661,101	833,315	5,494,416
In other public schools . . .	124,513	21,233	145,746
In elementary private schools teaching a vernacular.	346,156	20,878	367,034
TOTALS .	5,131,770	875,426	6,007,196

The number of children under primary instruction may thus be taken as 6 millions, or 15·7 per cent. of the population of a school-going age. Five years ago the answering figure was $4\frac{7}{10}$ millions of pupils ; the increase during the quinquennium has been nearly $1\frac{3}{10}$ millions.

315. The causes which depress the number under instruction in India are the slight demand for education in an agricultural country, the early employment of children, the diversity of castes and religions, the existence of large depressed communities and the social position of women. The influence of this last cause is both direct and indirect. So far as education and literacy are concerned, the female population may almost be ignored. The reaction on the male population cannot be estimated ; but, when half the population grows up practically illiterate, the incentive to education in the other half must be sensibly lowered; and, where home education is a thing almost unknown, the figures of literacy are affected and education does not bulk as a customary and natural adjunct of life. *Retarding causes.*

316. Of the male population of a school-going age, 29·8 are in educational institutions of all grades. Of the six million children under primary education, approximately 5,132,000 are males ; that is, about 26 per cent. of the male population of a school-going age is under primary instruction. Of the total male population of British India 110 per mille are literate. (These figures may appear inconsistent with those given in paragraph 320 for both sexes ; but the literacy there is for the most literate quinary period ; in the present case. the percentage of literacy is reckoned for all ages, *Education and literacy among males.*

including childhood when the percentage is naturally insignificant.) If we take the male population over 10 years of age, the percentage of literacy is 15·1.

The length of school life.

317. It is important, in judging the value of the education given, to consider the length of school life and the effect upon literacy. In 1912 figures were collected showing the classification and approximate age of the majority of pupils in ordinary schools throughout India. The composite table compiled from these figures is shown as general table X. The classification differs slightly in provinces, *e.g.*, some have no infant classes so named, others have one and others two such classes. Hence the figures in columns A and B and to a less extent the figures under other columns have had to be adjusted so as to produce a uniform classification. It is necessary to consider here only the primary stages. Pupils under secondary education number 353,000 ; and this is the number contained in columns VI to X and a portion of V. It will suffice therefore to consider the columns A to V, which may be taken as showing the pupils under primary instruction.

318. The calculation of the average school life which may be deduced from these figures is necessarily based upon a considerable number of assumptions and approximations. It may be assumed that each child reading in a higher stage has read in the stage before ; also, that the time taken by each pupil in passing through each stage is a year. The particulars recorded for each age do not bear out the accuracy of these assumptions, but age-figures in India cannot be regarded with any reliance. Further, the proportion of children who have read for any given period depends, not on the number of children shown in the lower stages in this table, but on the figures which would have been shown in tables for previous years had such figures been collected. This may be rectified by assuming (what is approximately correct) that the numbers attending school in recent years have been increasing at the rate of five per cent. per annum. The method of calculation is shown in appendix XVII. The average school life of the primary pupil (that is, of the great bulk of pupils) is approximately 3·83 years.

319. It is interesting to observe that the provincial tables show that school life is longer where the board school system prevails, *e.g.*, the age is very short in Bengal, moderate in Madras, comparatively long in Bombay, the United Provinces and the Central Provinces. Exceptions are the Punjab and Burma. The organisation of classes in the Punjab doubtless causes the school age as calculated to appear shorter than it really is ; in Burma the public schools educate less than half the pupils and presumably draw those who would naturally stay a considerable time under instruction, thus vitiating the comparison.

The growth of literacy.

320. Before full deductions can be made from these figures, it is necessary to consider the important question of literacy and illiteracy. At the census of 1901 it was found that of the total population of India (both British India and native States) 53 persons in every thousand were literate. At the census of 1911 it was found that the number had risen to 59 per mille. The following table gives the comparison as regards age and sexes :—

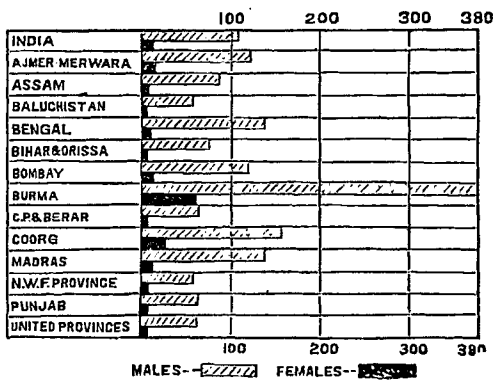
Age period.	NUMBER PER 1,000.					
	LITERATE IN 1901.			LITERATE IN 1911.		
	Total.	Male.	Female.	Total.	Male.	Female.
All ages	53	98	7	59	106	10
0—10	8	13	2	7	12	3
10—15	51	85	10	60	95	17
15—20	75	132	14	85	144	21
20 and over	74	139	8	82	150	12

These figures are for the whole of India inclusive of native States and other portions not dealt with in this review. In British provinces, literates number 62 per mille; in native States and agencies, 46 per mille.

321. It is important to remember that the definition of literacy adopted in 1911 differed from that of 1901, and likewise from that prescribed for earlier enumerations. In 1881 and 1891, the population was divided into three categories—the literate, the learning and the illiterate. In 1901 the class of 'the learning' was dropped; and literacy was defined as the ability both to read and to write any language. In 1911 the definition was ability to write a letter to a friend and read the answer to it. Hence those who can read but not write are not numbered among the literate; and their number is doubtless large. These changes have had two effects. First, as was remarked in the census report for 1901, the tendency of the enumerators was probably to omit from the category of the literate those persons who were still under instruction even though they had passed beyond the preliminary stage of education. This would depress the figures for the age period 10—15 and would account for the large difference between the figures in that and the next age period. (As this consideration affected comparison with the figures of 1881 and 1891 the Census Commissioner suggested that the comparison should be of those over 15 years of age, and that it be assumed that all who, at the two first enumerations, were classed as over 15 years and as 'learning' should be reckoned as literate. The result of this, when computed for all India, is a proportion of 82 literates per mille as against 74 in 1901.) Second, the more stringent definition has doubtless excluded in 1911 persons whose attainments would, in 1901, have entitled them to be classed as literate. This is particularly remarked in the report from Burma, where the proportions of literacy were found to have undergone reduction, especially in those areas where the *pongyi kyaung* (or monastic school) is most prevalent, presumably because the measure of education attained in these indigenous institutions was insufficient to enable its recipients to comply with the new condition. As will be noticed later on, girls are excluded from monastic schools. And it is significant that in Burma, while the percentage of literacy has risen during the decade ending 1911 from 215 to 222 per mille for the total population, it has fallen, as regards the male population, from 378 to 376, and has risen, as regards the female, from 45 to 61. In the figures for all India, the stagnation for both sexes in the age period 0—10 and the actual retrogression among males during that period are doubtless due to the more exacting definition. This receives further confirmation from Madras where the definition now prescribed throughout India was adopted in 1901 and where the increase in literacy amounts to 28 per cent. as against 16 per cent. for the rest of India.

322. It is necessary briefly to compare the literacy figures for different provinces. This is shown in the following diagram, in which a shaded line represents literacy among males, a black line among females. The diagram has been kindly supplied by the Hon'ble Mr. Gait, the Census Commissioner. It does not show Eastern Bengal and Assam, the figures for which are included in Bengal, while those for the new province of Bihar and Orissa have been separated. *Literacy in different provinces.*

Diagram showing the number of persons per 1,000 in each province who are literate.



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It will be seen that, among provinces, Burma, where caste and *purda* are unknown and where there is a firmly established system of indigenous schools, easily takes the first place. A second locality where education is comparatively widespread is the extreme south of India. This is not so clearly shown in the Madras figures. But the southern districts of Madras show a high percentage; the little province of Coorg is contained in this area; and so are the native States of Cochin and Travancore, where literate males are about 250 and literate females about 50 per thousand. In these areas there is a large Indian Christian community amounting to 25 per cent. of the population. Bengal, Madras as a whole and Bombay come next, with their comparatively large record of British rule, their sea-boards, their marketable crops, and the former with its tradition of learning, its large middle class, and the mental agility and taste for sedentary employment which characterise its inhabitants. The United Provinces, the Punjab and the Central Provinces are the most backward among the larger administrations. These are land-locked territories, highly agricultural; considerable tracts are inhabited by backward communities; and in some parts education was almost unknown before the British occupation. Needless to say, literacy is much commoner in the cities than in rural tracts—303 per mille of males and 91 per mille of females. As for the knowledge of English, it is spreading rapidly; 1·7 million now know English—an advance of 50 per cent. on 1901.

General conclusions regarding growth of literacy.

323. The general inferences which we may draw are as follows: (*i*) Literacy has increased during the decade which began a year before the commencement of the quinquennium ending 1906-07 and closed a year before the end of the quinquennium under review. The increase, reckoned on actual figures, has been from 53 to 59 per mille; reckoned on the population over 15 years of age, from 74 to 82 per mille. (*ii*) The increase has been proportionately greater among girls than among boys, representing an advance of 61 per cent. in the case of the former, of 15 per cent. in the latter. This is especially shown by the low proportion of female literates of 20 years and upwards, as compared with that in the age periods 10—15 and 15—20 years. Some of the census reports notice this striking advance. (*iii*) The general increase is to some extent minimised by the more stringent definition of literacy which has been adopted.

Comparison of figures of education with those of literacy.

324. A comparison between the figures of education and those of literacy produces some interesting results. It is generally supposed that in the majority of cases the results of education in India are not permanent. The truth of this supposition may be roughly tested by comparing the proportion of pupils in a period of five years and the proportion of literates in some subsequent period of five years with the actual population living during those periods. The periods taken may be from 5 to 10 years of age for education, and from 15 to 20 years for literacy. It is undesirable to take the intervening quinary period since those at school during it are fast diminishing and those reckoned literate are probably minimised by the fact that many are still under instruction. The result is that 108 per mille of the population from the completion of the fifth to the completion of the tenth year are under education, and 91 per mille are literate from the completion of the fifteenth to that of the twentieth year. It would, however, be dangerous to accept this as even an approximately correct calculation. Ages in India are difficult to ascertain and the figures for ages given in general table X conflict with those given for classes. It is safer to ignore the ages and simply take the earliest period of five years' schooling, assuming that the children at school during these five stages are aged about 5 to 10 years. This gives 148 at school in every thousand of the children between those ages. If 91 per mille are subsequently literate, then 39 per cent. of those educated rapidly lose the benefit of their education. The calculation is vitiated by the facts that the literates are the product, not of the figures for 1912, but of smaller figures in earlier years, and that general table X does not show quite the full number of those under primary education. These two causes of error act in opposite directions and may be taken as roughly cancelling each other. The failure of education to produce literacy in 39 per cent. of those educated may be assigned to the short school age and to the fact that the schooling takes place

at a very early age when its effects are easily effaced. In Burma alone the percentage of literacy between the ages of 15 and 20 exceeds (and largely exceeds) that of education for an earlier period of five years. The explanation is that elementary instruction is largely given in monastic schools, many of which are unrecognised and hence not included in the figures on which this calculation is based, and whose figures (even if they were included) would probably be under-stated.

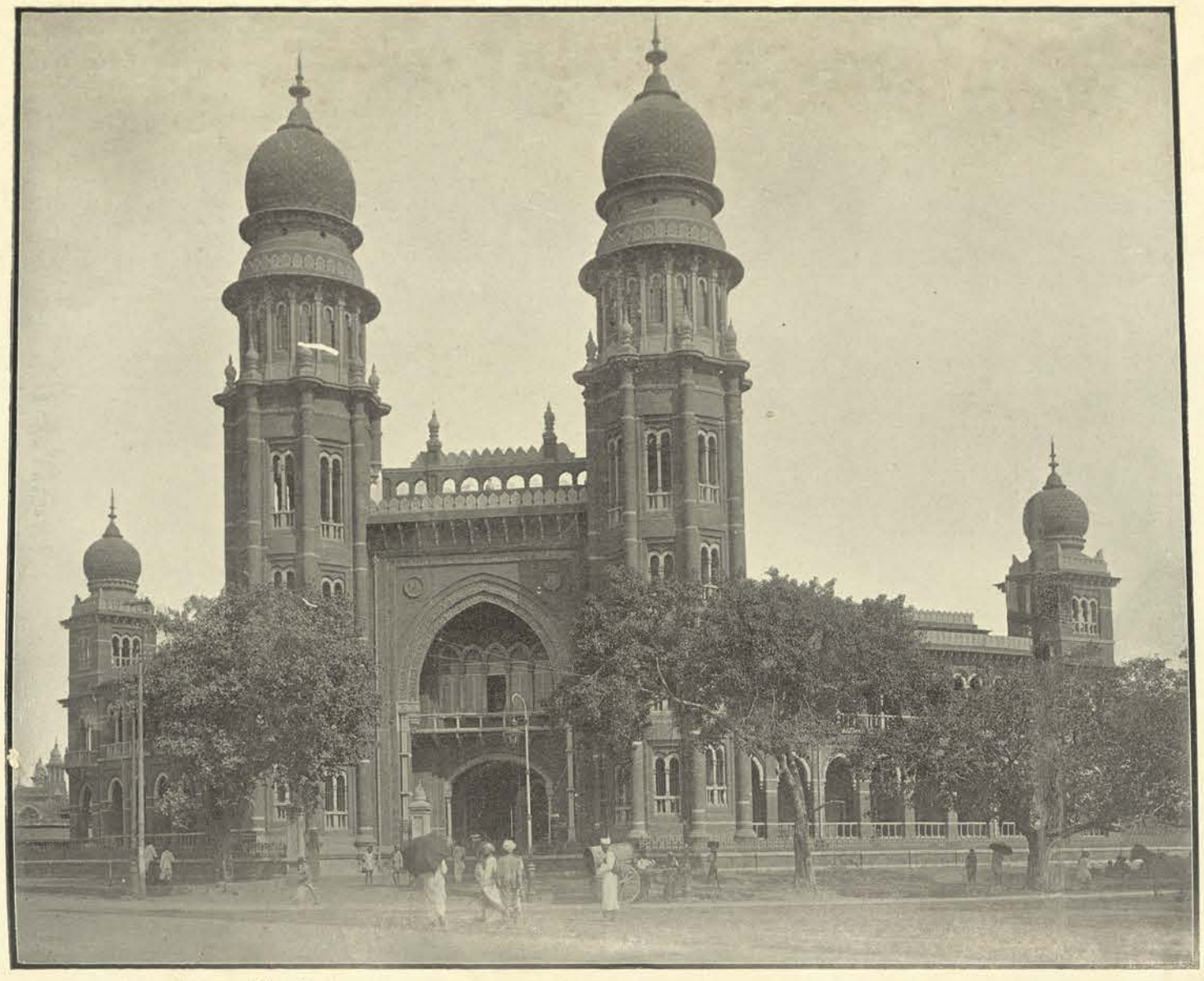


Photo.-Mechl. Dept., Thomason College, Roorkee.

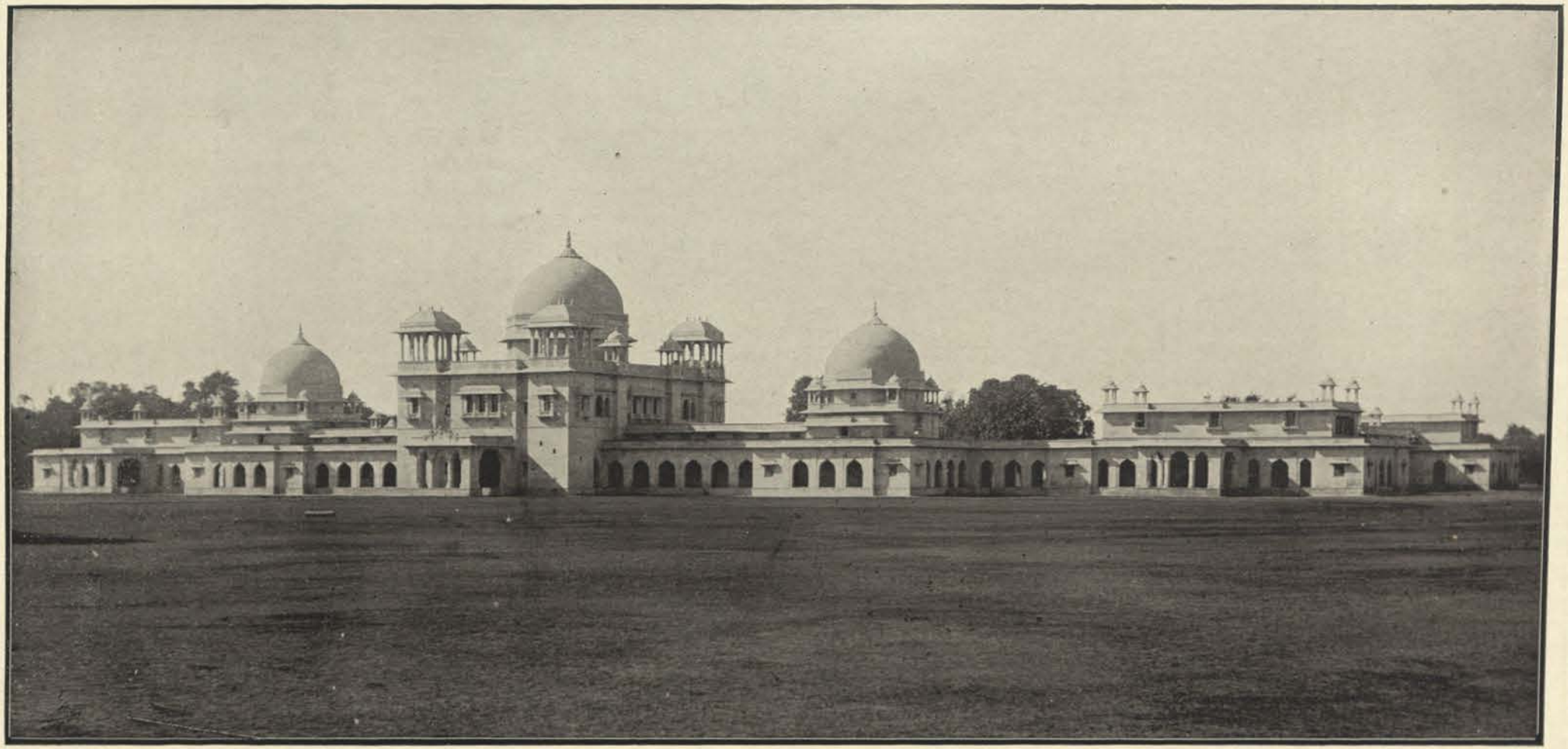
LAW COLLEGE, MADRAS.

Photo.-Mech. Dept., Thomason College, Roorkee.

KING GEORGE'S MEDICAL COLLEGE, LUCKNOW.

Photo -Mechl. Dept., Thomason College, Roorkee.

THOMASON COLLEGE, ROORKEE.



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AGRICULTURAL COLLEGE, CAWNPORE.

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MEDICAL COLLEGE, CALCUTTA.

CHAPTER IX.

PROFESSIONAL COLLEGES AND SCHOOLS.

I.—Introductory.

325. The present chapter deals with law, medicine, engineering, agriculture and allied subjects. Not all the institutions concerned are administered by the departments of education. Law and engineering colleges and schools are nominally under the local directors or universities, but their administration is largely influenced by the educational policy of the High Courts and the Public Works Departments. Certain legal examinations are, for example, controlled absolutely by the High Courts, while the universities control others. Medical institutions are under the supervision of the medical departments. Agriculture and forestry are not administered by the Department of Education and the final authority on these subjects in India is the Department of Revenue and Agriculture. Veterinary work is also dealt with in the same department.

II.—Law.

326. There are various grades of legal practitioners in India. Advocates or *vakils* of a High Court practise before that court (but the latter do not, save at Madras and Allahābad, practise on its original side). Pleaders and *mukhtars* practise in the subordinate courts, save in the Punjab, Burma and Central Provinces where first grade pleaders are allowed to practise in the Chief Court of the province. Admission to the rolls and the qualifications for admission are decided by the chartered High Courts of Calcutta, Madras, Bombay and Allahabad, and also (subject to the Local Government's approval of the rules framed under the Legal Practitioners Act) by the non-chartered Chief Courts of the Punjab and Burma. The High and Chief Courts are also empowered to make rules (subject to previous sanction of the Local Government in the case of Chief Courts) for the qualifications, admission and certificates of persons deemed proper to be enrolled as pleaders of subordinate courts. The usual qualifications recognised are (*i*) a call to the bar of England or Ireland or enrolment as an advocate of the principal courts of Scotland; (*ii*) the passing of an Indian university degree in law—the B.L. or LL.B., the M.L. or LL.M., the D.L. or LL.D.; (*iii*) the passing of the pleadership examination prescribed and conducted by the court itself; (*iv*) the passing of a minor examination, such as that for *mukhtars*, generally held by the court. The qualifications carry different privileges under different courts. Calcutta admits as advocates only barristers of England or Ireland and advocates of Scotland, and now likewise insists on a year's practice in chambers in England (unless the candidate is a member of the faculty of advocates in Scotland), and either three years' education in addition to this in the United Kingdom or a degree of a university either of the United Kingdom or of India. Other courts recognise the same but have not adopted the added conditions—save that the Bombay High Court requires a year's practice in chambers; but they also recognise Indian qualifications. Madras admits masters of laws of the Madras University after a period of further study; Bombay admits bachelors of laws of the University of Bombay after attendance and a further examination; Allahabad admits LL.D.'s of the University of Allahabad; the Punjab admits pleaders of the first grade who have practised for ten years (five of these in the Chief Court) or for three years in the Chief Court after obtaining the degree of doctor of laws of the Punjab University. Bombay and Allahabad also admit High Court or first grade pleaders after ten years' practice and under certain conditions. Madras and Burma admit advocates of other High Courts.

Legal practitioners and their qualifications.

327. The qualification for enrolment as a *vakil* is usually the bachelorship of law, with some further distinction—either honours at the examination,

or a further test, or a certain number of years of practice. A law degree is not insisted on at Bombay and Allahabad, provided the prescribed examination is passed; but at the latter High Court two years' attendance at a law college is required. A pleader must either have a law degree or have passed the examination prescribed by the court, for admission to which certain general educational qualifications are usually laid down. At Madras the candidate for the first grade pleadership must be a graduate; for the second grade an under-graduate. At Calcutta and Allahabad the intermediate standard is required, and also attendance at a law class recognised by the court. The qualification required in a *mukhtar* is generally the matriculation or its equivalent (in the Punjab the intermediate) and a special examination.

328. The pleadership examination entitles the successful candidate to plead in subordinate courts—such as those of district and sessions judges. A *mukhtar* (in provinces where this grade exists) generally practises (but does not plead) in the courts of subordinate judges; but in the Punjab he is permitted to practise in all civil courts subordinate to the Chief Court, and to plead in criminal courts inferior to the sessions court. It is not necessary now to enter into the qualifications of attorneys or differences of nomenclature found in different provinces.

329. This preface is necessary in order to show the precise place occupied by those who have undergone their legal training in India and the functions of the universities in connection with that training. As to the former, it will have been observed that barristers have generally the advantage over those trained in India for purposes of enrolment as advocates and practice upon the original side of High and Chief Courts. The Indian law degrees can be obtained only after graduation in arts or science, and by success in a searching examination. This has led many Indians to utilise the easier though more expensive conditions leading to a call to the bar. The resultant anomaly of " England-returned " barristers of no outstanding ability, ranking above purely Indian products of repute and experience, has recently attracted attention. The High Court of Calcutta has adopted the measures detailed above for ensuring a due measure of general qualifications in those who are enrolled as its advocates; and the High Court of Bombay has prescribed the condition of one year's practice in chambers.

Functions of the Universities.

330. As to the functions of the universities, these bodies prescribe and conduct examinations which are recognised by the courts as qualifying successful candidates for enrolment under themselves or their subordinate courts in various grades. The courts further make use of educational institutions in that the pleadership classes, attendance at which is compulsory before the pleadership examination can be attempted, are connected with and generally held in arts colleges often in combination with law degree classes. But the special examinations for pleaderships are conducted by the High or Chief Courts.

Development of legal education.

331. The story of legal education is told in Mr. Nathan's review. The original Acts of incorporation empowered the universities to grant degrees in law. A sub-committee was appointed to consider the regulations for the three older universities. Instructed to follow the model of the London University, it found that the systems of Hindu and Muhammadan law and the procedure and practice of Indian courts rendered the mandate impossible of close fulfilment. Two systems of opposite character evolved themselves—concentration at single colleges in Madras, Bombay and the Punjab, the growth of classes at numerous local colleges in Bengal and the United Provinces. Bombay more properly assumed a mid-way position; for, while the Government Law College (more properly an evening school attached to the Elphinstone College) alone taught the full course, classes attached to other colleges could present pupils for the preliminary examination—a plan which has now been abolished. Both systems proved unsatisfactory and were found to produce " many graduates in law, but few real lawyers "; but the latter was the more unsatisfactory of the two, because instruction (inadequate in both) was often almost non-existent in widely dispersed classes. The following quotation from the report of the Calcutta University may be taken as typical :—" There was not a single college devoted entirely to the teaching of

law; and judged from the point of view of the requirements of the new regulations they were all found to be far below the mark. The arrangements made were wholly inadequate and could only be regarded as mere colourable compliance with the regulations. The students as a rule were found to be irregular and unpunctual in their attendance; and in the majority of cases discipline was found to be extremely lax." The report quotes the opinion of Sir Ashutosh Mukharji, the Vice-Chancellor:—"The majority of students have no books; they do not intend to listen to the lectures; very many of them are employed as teachers in schools or clerks in public offices, and their only anxiety is to get credit for attendance at a certain number of lectures as required by the university regulations; and it is by no means an unusual incident for a student to get himself marked present by a proxy."

The feature of the quinquennium has been the recognition of these facts accompanied by attempts at remedy—the establishment of central institutions, the reform of courses and the improvement of the condition of students by the opening of hostels.

Reform during the quinquennium.

332. Any action tending to render less easy the entry to a remunerative and attractive profession is naturally regarded with some opposition. The dual control over courses and examinations does not facilitate reform. It is therefore not surprising to find that in the Bengals (where opposition would naturally be most strong) the steps hitherto taken have resulted in a qualified success. Much, however, has been accomplished. Law colleges and classes* numbered 35 in 1902 and 33 in 1907. They have now been reduced to 25, including two colleges which have not been shown in the Bengal general tables. There has been no falling off in students, who were 2,808 in 1902, and now are 3,046. On the other hand, not only has expenditure risen from Rs. 1,25,786 in 1902 and Rs. 1,57,008 in 1907 to Rs. 2,64,494 in 1912, but expenditure from provincial funds, which (owing to the cheap scale on which the schools were run and the theory that they must pay or more than pay for themselves) was a *minus* quantity in the two previous quinquennia, is now Rs. 37,093 a year; this means an increase of Rs. 40,640 since in 1907 government made Rs. 3,547 out of its classes. The changes in the way of concentration of institutions and improvement of staff, curricula and supervision are given in detail in the succeeding paragraphs.

(a) Concentration of teaching.

333. Madras, Bombay, the Punjab, Burma and the Central Provinces each possess one institution; the United Provinces has five, Eastern Bengal and Assam four and Bengal eleven.

In *Madras* the Government Law College prepares graduates for the B.L. degree and for the first grade pleadership examination, and those who have passed the intermediate for the second grade pleadership. It is self-supporting. The strengthening of the staff was under consideration at the close of the period and has since been sanctioned. The Law College at *Lahore* is maintained by the university. A whole-time staff was appointed during the quinquennium, and expenditure rose from Rs. 11,345 to Rs. 24,585, most of which is covered by fees. The vernacular classes have been abolished, the examination results improved and a hostel opened. In *Bombay*, too, there is now only one institution—the Government Law School (classed as a college). At the beginning of the quinquennium, six *mofussil* colleges were also recognised as preparing for the preliminary LL.D. In 1907, Dr. Selby pointed out that if a full-time college with non-practising tutors could be established, the course of study might be reduced to two years after graduation and the *mofussil* classes might disappear. The course has been so reduced; the classes have vanished; but the law school (at the Elphinstone College) is still an evening school, where, as Mr. Prior says, tired lecturers teach tired students, the whole course is not covered and the stipends are insufficient to attract the best lawyers as instructors. The school now contains 458 students and more than pays its own expenses, which amount to Rs. 26,144. The surplus funds are being accumulated for a building.

Partial concentration has taken place in the Bengals and the United Provinces. Central institutions have been established; but, while local classes

* All are now classed as colleges save one—the school in Rangoon. This institution was omitted from the supplemental table in the last review.

have been diminished, they have by no means been extinguished. The University of *Allahabad* opened a law college in 1907, which already contains 304 students—considerably over half the total in the province. But the increase in the number of these (from 307 to 559 during the period) and the want of a proper habitation for the central institution have contributed to the continuance of classes. The total number of institutions is now five as against six in 1906-07. The University College has a whole-time principal, a professor and two assistant professors. The work is carried on in the Muir Central College. But the classes are over-large for the rooms and will shortly be accommodated in the new senate hall. The erection of a separate building and of a hostel is under contemplation. Bengal and Eastern Bengal and Assam have been affected by the new regulations, the lengthening of the course and the general sense of dissatisfaction at the existing state of affairs. In *Bengal* four government and certain private colleges previously maintained law classes. In the former the classes had to pay their way, in some at least of the latter they were sources of considerable income. In 1908-09 the system was changed. A University Law College was opened at Calcutta, with a whole-time principal, three professors and eight assistant professors. It contains 639 students and costs nearly Rs. 62,000 a year, of which Rs. 23,500 comes from provincial resources. To provide for Bihar, the classes at the Patna College were not only continued, but raised to the status of a second law college both for B.L. and for pleadership students. It has a whole-time principal and four lecturers for 41 degree students, and one lecturer for 30 students reading for the pleadership examination. To provide for Orissa, six scholarships of Rs. 30 a month, tenable for two years, have been instituted at Patna. The other B.L. classes attached to the government colleges at Hooghly, Krishnagar and Cuttack were closed; they also disappeared at all private colleges save the Ripon in Calcutta. So much for degree classes. But pleadership classes have not only been continued at the City, Ripon and Metropolitan Colleges in Calcutta, and at the Midnapore, Berhampore and Tej Narayan Colleges, but (in view of local needs) have been started anew at the government arts colleges of Hooghly, Krishnagar and Ravenshaw (Cuttack), and (as stated above) at the Government Patna Law College. The result of this is that there are eleven colleges or classes (all are classed as colleges), of which three teach the B.L. course, and the remainder the pleadership course (two of the latter, *viz.*, Hooghly and City Colleges which had no pupils, have not been shown in general table III); three are government institutions, one (Midnapore) is municipal, one is aided and four are unaided. The University College is strictly an aided institution, but has been shown as one managed by government in the Bengal general tables. The number of students is 1,146 against 1,272 in 1907, the total expenditure was Rs. 1,10,390 against Rs. 43,141 and the expenditure from provincial funds was Rs. 39,725. A somewhat similar process has taken place in *Eastern Bengal and Assam* due to the same causes. The B.L. classes at the Dacca, Rajshahi and Braja Mohan Colleges have been closed. A single college has been opened at Dacca, of which the principal is identical with the principal of the arts college, while one whole-time and two half-time professors have been appointed. At the same time, however, classes (with insignificant numbers) for the pleadership examination continue to be attached to the Dacca, Rajshahi and Chittagong Colleges and (in Assam) to the high school at Gauhati.

In *Burma* the Government College at Rangoon has a small class of ten students. There are now no B.L. students. It is suggested that this is the result of the extension of the course to three years; and the professor considers the Calcutta University courses ill-adapted to the needs of Burman students, though certain changes in the regulations to meet Buddhist requirements have been made by the university. In the *Central Provinces* the class at Jubbulpore has been abolished and the teaching of law is now confined to the Morris College at Nagpur. The number of students is 77, having doubled in the quinquennium; expenditure has likewise doubled and now stands at Rs. 9,917, of which Rs. 4,333 is met from provincial revenues.

(b) The staff. 334. It will be observed that there has been a tendency to appoint full-time principals. These are generally assisted by professors who, with few

exceptions, are practising lawyers. This latter scheme is in accordance with the recommendation of the Universities Commission and has the advantage of utilising the services of men who are actively engaged in the profession.

335. Mr. Orange described at length the changes in the courses effected under the new regulations. In the present review, the courses and the most recent changes in them are briefly indicated in appendix IV and shown at greater length in appendix XIX. The most important modifications have been at Calcutta and Bombay. At the former university the B.L. course has been prolonged to three years, or to two and a half years in the case of those placed in the first division at the preliminary examination. (c) *The courses.*

At Bombay the course was of three years and commenced immediately after the passing of the intermediate, the first LL.B. examination being held after one year's study. It has now been reduced to two years and made wholly post-graduate. The resultant closure of the classes subsidiary to the Government Law School has been already noticed. At all universities the course now commences after graduation and (save at Calcutta) occupies two years. It ordinarily includes jurisprudence, Roman law, Hindu and Muhammadan law, the law relating to persons and property, contracts and torts, evidence and civil procedure, crimes and criminal procedure, etc. The principles of equity and of legislation, international law and other subjects are generally added either as integral parts of the course, for honours or for the higher degree. An examination in some portion of the subjects for the B.L. or LL.B. is held at the end of each year of study. The final examination results show a slight improvement upon those in previous periods. Of 1,530 candidates presented in 1912, 741 passed. The higher degree of M.L. or LL.M. is also conferred on the result of an examination, ordinarily after two years' study subsequent to the bachelorship; the Punjab University offers no such degree. All universities save Bombay offer a D.L. or LL.D. degree on presentation of a thesis.

As regards the pleadership examination, it will suffice to say that this is a test held under the control of the High or Chief Courts, generally as an alternative to the possession of a law degree. Though the classes are held in conjunction with the college classes for the degree, and though some university qualification is generally required as a condition of entrance to the examination, the test itself is under the control of the court. The same is the case with the examination for *mukhtars*, save in the Punjab, where it is under the control of the university.

336. The old type law class was (and, where it persists, still is) held in a class room of an arts college in the early morning or the late evening. The law-lecturer would come in for an hour or so, mentally absorbed in preparation for his day's work in the court or fatigued at its conclusion. Such of the students as deemed it incumbent on them to put in an appearance would straggle in, and hurry off at the earliest opportunity to their own labours (not infrequently those of a teacher in some neighbouring high school). There was no sort of corporate life, no special building, no library, no supervision. A certain amount has recently been done by way of supplying these institutions with local habitations. The Madras Law College has a fine building. The University Law College at Calcutta is held in the new Darbhanga buildings, while that at Allahabad will be located in the new senate hall as soon as it is ready for use. The law colleges at Bombay, Nagpur, Dacca and Rangoon are held in the rooms of the government arts colleges at those places, and at Lahore apparently in hired buildings. Libraries, too, have been provided in certain cases. The Calcutta University Law College and the Patna Law College have made ample provision. The Punjab Law College has a fairly valuable library. There is also a library in the Madras Law College. The Allahabad University propose to establish a library of their own with a portion of the imperial grants recently made and this will no doubt provide for legal studies. (d) *Collegiate life and residence.*

337. More important still is the recognition of the necessity for making residential provision for a class of students who, though older than the majority of arts students, must often be driven to lodge in insanitary and undesirable places among surroundings wholly unfavourable to a proper upbringing.

Hostels are attached to the Patna Law College as well as to the Punjab Law College. The Calcutta University College hostel has already been erected with the aid of a grant of three lakhs. It is under contemplation to construct hostels for the University Law College at Allahabad and Rs. 1·05 lakhs has been granted towards its erection. A start has been made, but much still remains to be done.

III.—Medicine.

General.

338. Medical education in India is imparted in medical colleges or schools, according to the standard of qualification required. The colleges are affiliated to universities, and their curriculum is designed primarily to meet the requirements of those who desire university degrees; but, as in Europe, some cater also for the class of students aiming only at a diploma qualifying them to practise medicine in India. A brief description of the main changes in courses, etc., has been given in chapter V and appendix IV.

Medical colleges.

339. In some colleges special courses are held in subjects which are only indirectly concerned with the practice of medicine; for example, at Madras there are classes for compounders, *dhais* (midwives), and sanitary inspectors. In other parts of India these subjects are generally taught in the schools.

All the colleges admit students of both sexes; and the great majority enter with the deliberate intention of procuring service under government. The students may roughly be divided into the following classes :—

(*a*) Indians who are under training to become " civil assistant surgeons " under the provincial administrations. These were formerly required to obtain only a licence to practise medicine and surgery; but the standard has recently been raised, and they now have to undergo a six years' course of study and obtain the university degree which has taken the place of the old L.M.S., save in Madras and (for the present) in Bombay.

(*b*) Military students, who are Europeans or members of the domiciled community, and are educated at the expense of the state to the standard required for the military assistant surgeon branch of the Indian subordinate medical department. These students do not matriculate, and they are admitted after a competitive examination in general knowledge which is nothing like as severe as that required from university students. Military students are given diplomas by the colleges; none of them go on to obtain a university degree.

(*c*) Casual students, male and female. These are studying medicine with the intention of becoming private practitioners.

(*d*) Post graduate students. These are to be found in Madras College, where classes are held for civil sub-assistant surgeons after completion of seven years' service.

Medical schools.

340. Medical schools, as distinct from colleges, are not affiliated to universities. They give a 4-year curriculum, with a school diploma or licence to practise. Theoretically they demand the preliminary standard of matriculation into a university before admission; it has, however, up to the present, been found quite impossible to insist on this standard; and students with lower qualifications have to be accepted. The instruction is now imparted in English.

The male students at the schools are almost entirely candidates for employment under the state as military or civil " sub-assistant surgeons." Many of the female students, too, are similarly intending to enter the provincial subordinate medical service, or the hospitals administered by the Dufferin fund. The remainder, of both sexes,—as yet a small number—ultimately go into private practice, or take service under commercial bodies, such as mines, tea gardens, shipping companies and the like.

Increase during the period.

341. Individual medical colleges are dealt with in the succeeding paragraphs and an account of the government medical schools is given in appendix XX. The number of colleges has during the quinquennium increased from 4 to 5 and of scholars from 1,542 to 1,822. Institutions for medical instruction (including both colleges and schools) have increased from 31 to 33; pupils from 4,720 to 6,044, and the direct expenditure on such institutions from

Rs. 10,69,451 to Rs. 13,62,227. The total expenditure in different institutions for the years 1907—1912 is shown in appendix XXI. The expenditure from public funds has risen from Rs. 8,97,365 to Rs. 9,58,678 during the same period.*

342. There are now five medical colleges :— *Individual colleges.*

The Medical College of Madras.
The Grant Medical College, Bombay.
The Medical College of Bengal, Calcutta.
The Medical College of Lahore.
King George's Medical College, Lucknow.

The last is a new institution, only recently opened.

The number of students attending these colleges at the beginning and end of the quinquennium was as follows :—

	1907.	1912.
Madras	195	423
Bombay	679	531
Calcutta	425	612
Lahore	243	156
Lucknow	*Nil*	100
TOTAL	1,542	1,822

The main changes in the previous quinquennium (which saw the introduction of new regulations in the universities) were the abolition of the Licence in Medicine and Surgery (L.M.S.) in two out of the five universities, and the breaking up, for purposes of specialisation, of the M.D. degree. These reforms have been continued during the period under review.

The changes in curriculum, in connection with the abolition of the Licence in Medicine and Surgery, and the substitution for it of the degree of bachelor of medicine, have necessitated numerous additions to the teaching staffs of the colleges, which, along with other matters of interest, are detailed below. In most of the colleges there has been a decline in the number of students, which is partly the result of the higher standards of preliminary education demanded before admission, and partly of the deterring effects of the longer course now required for a university degree. It is expected, however, that this decline will be found to be purely temporary, as, indeed, it has already proved to be at Calcutta.

343. At the *Madras* college the physiological and hygiene laboratories have been completed. The construction of hostels for civil and military students is still under consideration. More lecture theatres are urgently required. There is no suitable accommodation for the teaching of pathology, and it is proposed to create a pathological institute, under the charge of the professor of pathology, who will also be responsible for instruction in bacteriology. *Medical College, Madras.*

A lecturer in physics has been appointed, thus relieving the professor of chemistry of the duty of teaching this subject. A committee has enquired into the whole constitution and staffing of the college, and the recommendations made are now under consideration. Briefly, it is proposed to create whole-time major professorships of chemistry, physiology, anatomy, pathology and medical jurisprudence, and to add a minor chair of clinical and operative surgery.

The number of students has increased from 157 to 423. Of those working in the college department, *i.e.*, those who are studying for the M.B., C.M. or L.M.S. qualifications, there are now 296. There are 12 female students in this department, a slight decrease. The chemist and druggist department

* These figures and those of expenditure differ from the figures given in the general tables and in the supplemental tables. The figures in the general tables are vitiated by the fact that medical colleges and schools are altogether omitted in the Madras report. The supplemental tables have been rectified as far as possible by the addition of the Madras figures for 1911. The figures quoted in the body of the report are taken partly from the supplemental tables and partly from figures supplied by the office of the Director General, Indian Medical Service.

still fails to attract students, although the standard for admission has been lowered. The sanitary inspectors' class, however, numbering about 40 students, has been very successful.

The number of students who qualify tends to rise; in 1907-08 eighteen passed out (eleven L.M.S., seven M.B.), in the latest return thirty-two obtained the L.M.S. and eleven obtained the M.B.

Grant Medical College, Bombay.

344. During the quinquennium some very necessary additions were made to the college in *Bombay*. The new bacteriological and biological laboratories were opened in 1907-08, a pathological laboratory in 1909, and a hostel to accommodate 240 civil students. The hired quarters reserved for the use of military students having been found to be inconvenient and unsatisfactory, it has been decided to build a new one; and plans are under consideration.

Several important changes have been made in the staff to meet the requirements of the new curriculum. A whole-time professorship of physics was created in 1909-10, and whole-time chairs of pathology and anatomy have just been sanctioned by the Secretary of State, and will be filled at once. The professor of pathology will be an I.M.S. officer, but the chair of anatomy will probably be filled by an Indian.

Lecturerships on diseases of the ear, nose, throat, on anæsthetics, on electro-therapeutics and on skin diseases have been created; also tutorships in bacteriology and ophthalmology. On the other hand, with the disappearance of botany as a subject of examination, the minor chair in that branch of science has been abolished.

At the commencement of the quinquennium there were 638 civil and 41 military students; at the end, the corresponding figures were 496 and 35. There has thus been a decrease amounting to 142 civil students, which is ascribed to the increasing severity of the examinations and to a larger number of students withdrawing during their course. There are now 29 female students, as compared with 25 in 1907.

Calcutta Medical College.

345. During the quinquennium the *Calcutta* medical college and hospital have been modernised and the teaching accommodation has been greatly improved. The fourth or administrative block was completed in 1912, and there are now an examination hall, a spacious office and library, students' common room, waiting room for female students and a professors' room. The new anatomical museum was opened in 1909. Certain buildings are still urgently required, *viz.*, biological, physical and pharmacological laboratories, a refreshment room for students and a hostel for civil students. The first of these will be included in the scheme for the creation of a school of tropical medicine, referred to later, which it is hoped will shortly be taken in hand. The need for a hostel was noted in the last report, and is more urgent than ever owing to the increase in Calcutta house rents.

The introduction of the new regulations rendered necessary the appointment of a whole-time professor of biology, and the inauguration of a special biological department. An officer was appointed in 1908-09, but the work is hampered by the absence of a special laboratory. A whole-time professor of anatomy was appointed in 1912, relieving the second surgeon of the hospital of this duty.

The number of students continues to rise steadily. The average number of regular students has risen from 454 in 1908 to 612 in 1911-12, and of these an average of 17 are women. The military class does not fluctuate much, but the number of " female certificate " class students has declined from 10 to 5. The number of students who qualified has fallen from 69 (67 L.M.S. and 2 M.B.) in 1907-08 to 53 (50 L.M.S. and 3 M.B.); this decline is due to the much greater stringency of the M.B. examination. The number of failures in the preliminary scientific examination is noticeable, and it appears probable that the new matriculation is not a sufficiently searching test of the capability of the individual to undertake further study.

There has long been a demand for a qualification in the subject of tropical medicine, such as is granted by some of the universities and examining bodies in the United Kingdom. It has now been decided that a diploma of tropical medicine (D.T.M.) shall be given by the Calcutta University. The corollary

to this decision is the creation of a school of tropical medicine; and sanction has recently been received for this from the Secretary of State. The new school will form part of the Medical College, from which its staff will be drawn. The course at this school will be a post graduate one, and will be open to all medical officers and subordinates serving under government as well as to the profession generally.

346. The higher standard of preliminary education demanded by the revised medical regulations and the abolition of the L.M.S. qualification have resulted in a reduction in the number of students at *Lahore*. Moreover, preliminary science teaching is now given at the Government College and other institutions. Students of other universities than the Punjab are now ineligible for admission. The actual decline is from 257 students at the end of the last quinquennium to 156 at the end of the present one. This decline will, it is believed, cease automatically when the science faculty can pass more students than it has hitherto done. At present all the students are studying for the M.B.B.S. degree of the university. The association of the medical school with the college continues; the proposal to separate them, long looked for, has not yet proved feasible. There is a proposal, in connection with the King Edward VII Memorial scheme, to have a new college building in addition to extensions of those existing, as well as a hostel for civil students. The number of students who qualify has increased; in 1907-08, 13 passed the L.M.S. or old M.B., whereas, in 1911-12, 26 qualified under the old rules and 10 obtained the new M.B.B.S. *Medical College, Lahore.*

A professor of pathology and tutors in medicine, materia medica and physiology were appointed in 1908, and professors of gynæcology and ophthalmology in the following year. The three house surgeons have also been utilised as clinical assistants, and a demonstrator of anatomy has been added to the staff.

347. The college at *Lucknow*, which is affiliated to the Allahabad University, has only recently been opened. It has had the advantage of the experience of other colleges and is equipped, both from the point of view of staff and accommodation, in the most up-to-date manner. There are at present sanctioned whole-time professors of surgery, medicine, pathology, physiology, anatomy and materia medica; as the students are now only in their second year, only the last three are actually employed. The college will fill a much felt want, and will relieve Calcutta and Lahore of the students who formerly came to them from the United Provinces. The course of instruction is designed for students working for the M.B., Allahabad. *King George's Medical College, Lucknow.*

348. The X-Ray Institute continues to impart instruction to those who desire a working knowledge of skiagraphy. Primarily intended to train officers for military purposes, it now has courses for officers and subordinates in military and civil employment; and although some 50 individuals are trained yearly, there is always a demand for admission. A well marked demand for a longer course, covering electro-therapy, is also evident; and the extension of the scope of the institute is under consideration. *Special courses of instruction.*

The Central Research Institute, Kasauli, has now become an educational institution; classes of instruction in bacteriological technique are held there six times a year, and these classes are open to selected officers and subordinates in government service. Here again the demand for admission is greater than the available accommodation. Special classes are also held twice a year for instruction in the study of malaria, and are well attended. Finally, opportunities are afforded for research at the institute, under the guidance of the staff.

IV.—Engineering and surveying.

349. Colleges and schools of engineering prepare students for service in the Public Works Department, or as civil, mechanical and electrical engineers in other employ. Some of them also contain classes of a distinctly industrial character. Hence it is not always possible to distinguish between what may be termed the 'professional' and the 'industrial' institution, or between students of these two classes in a single institution. Each large province, however, contains an engineering institution. Madras, Bombay, Bengal and the United Provinces have colleges. These prepare students for the univer- *General.*

sity degrees (save in the United Provinces, where the university has no faculty of engineering and the college at Roorkee bestows its own diplomas) and for superior posts in the service. The changes in the university courses have already been indicated in the chapter on universities and in appendix IV. At Calcutta, Bombay and Madras the course commences after the intermediate, and is now specialised in its later stages. The Punjab University alone has a lower course commencing after matriculation. They also prepare pupils of lower original qualifications as overseers and sub-overseers for the subordinate service. In some provinces there are a few guaranteed posts; and sometimes practical training under the public works department is arranged after the completion of the college course. The Punjab and Burma contain each a school—a kind of lesser engineering college—and a privately managed college in Lahore also is affiliated for the engineering certificate of the Punjab University. The Central Provinces is building one. In addition to the college at Sibpur, Bengal and Eastern Bengal and Assam have a number of schools which train up to the overseer and sub-overseer standards. It is interesting to notice that bifurcation in special studies is contemplated in the higher of these schools. Engineering institutions frequently contain technical and industrial classes (these are prominent at Sibpur and Roorkee) and survey classes. Supplemental table no. 138 shows only colleges, since the schools are classed in the returns with purely technical and industrial institutions. But schools as well as colleges are described, province by province, in the following paragraphs.

Institutions: (a) in Madras.

350. The College of Engineering at *Madras* was reorganised after 1904 with courses of three years for civil and mechanical engineers, and for upper and lower subordinates. The former courses are open only to graduates, the latter to those who have passed the intermediate and the matriculation respectively. It has now been decided to open a probationary subordinate class consisting of matriculates and holders of the school leaving certificate. This will in future form the lower subordinate class; and out of it will be chosen thirty students who have shown their fitness during the first two years of study and will compose the upper subordinate class. An assistant instructor of civil engineering has been added to the staff; and the subordinate staff is in future to be recruited from the public works department, officers being transferred to the college for three years only with a view to ensure their being in touch with practical work. The non-university examinations have been placed in the hands of the staff. It is proposed to erect new buildings for the college near Adyar.

Sir A. Bourne says that this college is the only institution in the presidency that can be called a school of engineering and surveying. There are, however, (apart from schools for Europeans) three schools which offer the subject:—(*i*) Chengalvaraya Naicker's Technical Institute at Vepery. In 1911 it contained 35 pupils studying civil engineering, 98 under training as mechanical foremen and fitters, and 87 studying machine-drawing, construction, etc. It received large grants for machinery during the quinquennium. (*ii*) and (*iii*) The Madura Technical Institute and the Teppakulam Institute of Mechanical Engineering at Trichinopoly are doing similar work on a smaller scale. The latter has electrical engineering classes.

(b) in Bombay.

351. The *Bombay* presidency has the College of Engineering, Poona. It contains a university branch, in which most of the students are found, and mechanical and electrical branches. "This college," says Mr. Prior, "has passed through a quinquennium of considerable change and activity. The chief features of the period are the transfer of the classes in agriculture to the new Agricultural College in 1907-08; the opening of a technical normal class for workshop students in 1909; the discontinuance in 1911 of the B.Sc. degree course; and the change of the name of the institution from 'College of Science' to 'College of Engineering;' the taking of the degree of B.E. (Civil) by students, for the first time, in 1911; the opening of the new hostel for 76 students in 1907; the completion of the new chemical and geological laboratories and museum and a new wing of the main building, including a lecture-hall for physics in 1908; the completion of a new hostel for apprentice-students in 1910; extensions of the workshops in 1908 and 1911; the commencement of the new engineering laboratory in 1912; the appointment of a

professor of mechanical engineering in 1908 and of an assistant professor of the same subject in 1909; and the appointment of separate professors of chemistry and geology." It is interesting to notice that geological and engineering tours have been organised, the latter to irrigation works, tanks, drainage and sewage works and to the Tata works at Lanoli. An engineering laboratory is under construction and will, it is said, be the finest of its kind in India.

There are three small aided engineering classes, the largest of which is attached to the Dayaram Jethmal Sind College at Karachi.

352. The organisation in *Bengal* and *Eastern Bengal and Assam* is peculiar. The two provinces may conveniently be treated together. A single system of training matriculates for subordinate posts in the public works department prevails. This training is carried out in a number of technical schools (really minor engineering schools which teach only to the sub-overseer standard), in the two schools of engineering and in the apprentice department of the college (in all three of which instruction is continued to the overseer standard and the foreman mechanics' certificate). A single joint board of technical examinations supervises the tests for the overseer and sub-overseer classes and also for 'B' classes in high schools, and performs other functions. Finally, a single college (the Civil Engineering College at Sibpur, close to Calcutta) instructs those who have passed the intermediate in a degree course under the Calcutta University whose degree admits to higher posts in the public works department. *(c) in the Bengals.*

353. This college is the central institution for the two provinces, and arrangements are made for reserving vacancies in the classes for pupils domiciled in Eastern Bengal and Assam. Its work is of a singularly varied nature, and may be divided as follows:—(*i*) The engineer department admits those who have passed the intermediate (in practice many graduates also enter it), teaches up to the university B.E. degree and thus prepares its students for the engineer branch of the public works department or for industrial employment. The university course consists of two stages, the I.E. and the B.E. (intermediate and bachelor in engineering). The intermediate is now taken at the end of the second instead of the third year of the course, and the major portion of the mathematics and science has been removed to it with a view to concentration on the professional subjects during the subsequent two years (in place of one year) which now intervene between this examination and the degree. This change has made the intermediate more difficult to pass, but has increased the percentage of success in the degree examination. After the intermediate stage the university regulations prescribe separate specialised courses for the B.E., *viz.*, (*a*) civil, (*b*) mechanical and electrical and (*c*) mining engineering. The two second branches, however, exist as yet only on paper, no provision having been made for their teaching. Thus the college in its engineer department trains for the public works department, and B.E.'s are eligible for appointment in its engineer branch. A certain number of B.E.'s are annually sent for practical training to that department, and compete for an annually guaranteed post of assistant engineer. (*ii*) The apprentice department admits matriculates and Europeans who have passed an equivalent examination. These undergo three courses: (*a*) a two years' course leading up to the sub-overseer examination, (*b*) a one and a half years' course leading up to the third grade overseer examination, (*c*) a one and a half years' practical training leading up to examination for the certificate of foreman mechanic or of foreman mechanic and sub-engineer. The sub-overseer course is also taught in the smaller technical schools and the two schools of engineering. The latter also teach the courses designated (*b*) and (*c*) above. The examinations are conducted by the joint board of technical examinations. In future the overseer examination will be divided into two branches—that of civil engineering and that of mechanical and electrical engineering. Classes for this latter branch have been started at Sibpur and Dacca. (*iii*) Though provision is still lacking for instruction up to the degree in mining engineering, a two years' course in mining is open to those who have passed the sub-overseer examination. This, however, together with the classes in the mining districts, will be more conveniently described in the chapter on technical and industrial education.

(*iv*) A department of tinctorial chemistry was opened in 1910, and Mr. R. N. Sen, M.Sc. (Leeds University), was placed in charge. The class does not seem to have attracted many students. (*v*) In 1908 short courses were opened to selected telegraphists for training as sub-assistant superintendents of telegraphs. (*vi*) In 1907 a motor driver mechanic class was opened, but closed after three years, as sufficient opportunities for training presented themselves in the local workshops.

The changes in courses have necessitated some changes in the staff, the most important of which are the abolition of the staff of the agricultural department (now discontinued), and the addition of the professor of tinctorial chemistry and four demonstrators in various subjects.

Throughout the quinquennium the question has been debated of the removal of the college from its present unhealthy site at Sibpur—a river site on the Hooghly, which would be of great value for port and commercial purposes. It was at first decided to transfer the institution to Ranchi. But criticisms were advanced against the idea of locating branches of technical education at a place so far removed from industrial centres. " The matter was finally referred," says the report, " by government to a large and representative committee for consideration; and though a definite decision has not yet been arrived at, the probabilities now are that, in accordance with the general tenor of the recommendations of the committee, a technological institute will be established in Calcutta, the mining classes will be moved to Asansol, and the civil engineering department to a residential college in the mofussil, most likely in connection with the Dacca University."

354. For an understanding of the organisation of schools in these two provinces, it is necessary to explain that they consist of technical schools, which teach the sub-overseer course, and engineering schools, which teach both the sub-overseer, the overseer and the foreman mechanics' certificate course and are in fact replicas of the apprentice department at Sibpur. The entrance qualification to the sub-overseer course is the matriculation, or the ' B ' final examination which completes an alternative high school course. As already stated, the sub-overseer course occupies two years. But a boy who has passed the ' B ' final had already gone through some simple technical instruction and was permitted to enter straight into the second year. At the end of the quinquennium this was changed for reasons presently to be explained; and ' B ' class pupils are now admitted only to the first year class. Those who have successfully completed the sub-overseer course can obtain service under government, local bodies or private persons; or they can proceed to one of the engineering schools or to Sibpur and there better their prospects by undergoing the overseer course for a year and also the foreman mechanics' for a further year and a half.

355. The schools of engineering are the Bihar School at Patna and the Ahsanulla School at Dacca. They are well-found schools under European engineers and teach the sub-overseer, overseer and foreman mechanics' certificate courses. They also contain survey classes for the training of *amins*. The former has recently become independent of the Patna College. It contains 188 pupils. The main departments at Dacca contain 287 pupils; and there are also artisan classes, which are really industrial. The school has been greatly improved and the staff strengthened. A hostel now provides for 108 pupils. An electric installation has been laid down which affords instruction to the pupils and lighting and fans to the Dacca Arts College, the school itself, the attached hostels and neighbouring residences. The school, though thus improved, is said no longer to meet the needs of the province.

356. Exclusive of schools for Europeans, there are also the technical schools, which teach the sub-overseer course and frequently have survey, artisan and other classes in addition. There are three of these in Bengal—at Burdwan, at Midnapore (the Maisadal Technical School) and at Ranchi. Eastern Bengal has five such schools, with 1,155 pupils. All are managed by district boards save that at Barisal, which was provincialised at the wish of its managers.

These engineering schools, especially those of higher grade, are very popular. The pupils ordinarily preferred for admission were those who have read in the 'B' classes of high schools (see paragraph 205), and those who have matriculated in a high division. The 'B' classes, however, which were organised as a modern or technical side of high schools, have not been an unqualified success. In the first place, they have proved unpopular in Bengal, where, in the last year, only seven passed the examination. In Eastern Bengal they proved more popular; and 1,195 pupils are reported to have attended them during the quinquennium. But the fact that out of this number only 180 passed the examination is significant. In both provinces the classes have been badly reported upon. "As a rule," says the inspector of Chittagong, "only such boys as are likely to prove a certain failure in the general line obtain admission into the 'B' classes, and the result is that the few students who come to join it cut a sorry figure when they enter the sub-overseer class." Hence the product of these classes has now fallen into some disrepute, and the examining board have made proposals (since sanctioned) that, among the special subjects taught, engineering should be discontinued and only mensuration and elementary chain surveying retained, and that the privilege of admission to the second year of the sub-overseer course should be withdrawn.

357. The Civil Engineering College at Roorkee similarly trains engineers and subordinates for the *United Provinces*. Like the Sibpur College, this institution also makes provision for technical instruction and aims at being the engineering branch of the provincial technological institute. To this end, a department of technology was established in 1909; but the first experience has not been very encouraging. A course of sanitary engineering has been introduced in the lower subordinate class. The other departments of the college have an industrial aspect and will be described in the appropriate chapter. A professor of mechanical engineering with subordinate staff was appointed in 1910. The addition of water-supply, extension of the workshops, increase of power, new chemical and electrical laboratories, new photo-mechanical rooms and an electric installation for lights and fans are among recent improvements. Hostels have been erected, and a new engineering laboratory constructed. The college makes arrangement for admission of Europeans. "Apart from class work," says Mr. de la Fosse, "the college is full of life. The volunteer has uniformly done well, and games of all kinds and athletic sports have been cultivated with keenness and assiduity. Two new outrigged fours from Oxford should, as the principal remarks, give a further impetus to rowing. The health and conduct of the students has been satisfactory. At the Allahabad Exhibition the college organised a special court of its own which was full of interesting exhibits of its work and its relations with the world of industry." (*d*) *in the United Provinces.*

A useful development of this college, though it is not strictly educational, is the photo-mechanical and lithographic department. This has been considerably increased during the quinquennium and did useful work for the Imperial Durbar at Delhi and also publishes maps, etc. It is responsible for the illustrations which figure in the present volume.

In the *Punjab*, the school of engineering at Lahore was taken over by government from the university in 1906. It was, says Mr. Godley, in an unsatisfactory condition at the opening of the quinquennium. A committee was appointed, and it was decided to remove the school from Lahore and to appoint a staff with higher engineering qualifications. "At the same time the number of annual admissions was restricted to 50, and an entrance test was instituted. The committee thought that stress should be laid, as at Roorkee, on the practical training of the students, rather than on their success in an university examination, if appointments in the public works department were to be given them. Subsequently a scheme was sanctioned for a new engineering school at Rasul, which should be under the charge of an assistant engineer; a staff of good qualifications was appointed, and the school moved into its new quarters in 1912. This change may be ranked as an important development in the history of technical and engineering education in the province." (*e*) *in the Punjab.*

This school and likewise the classes at the Dayanand Anglo-Vedic College, Lahore, are affiliated to the Punjab University for purposes of presenting students at the engineering certificate examinations.

(f) in Burma.

358. The Government School of Engineering at Insein in *Burma* was reorganised during the quinquennium. It now contains (*i*) engineering and draughtsman's courses of one, two or three years, open to matriculates or those who have passed an equivalent examination, and qualifying pupils for upper subordinates or draughtsmen in the public works department; (*ii*) a technical high school with a three-year course, open to those who have passed standard VII or the middle English examination, and qualifying pupils for lower subordinate posts. Mr. Covernton says, " New buildings and shops with new fittings and machinery have been provided, the school enjoys excellent accommodation and a fine compound, the staff has been increased and is well paid—and the numbers in attendance have fallen from sixty-three to thirty-five. The institution, avoided by the Burman and the European, has served as a refuge for domiciled Indians and immigrants of very mediocre educational attainments from the Punjab and other Indian provinces."

Among the main causes for this want of success, he suggests the temperament and circumstances of the Burman, the absence of sufficiently attractive prospects, the length and expensiveness of the course and the alleged lack of adequate stipends—especially for Burmans. It is proposed to place the school under a public works officer of the imperial service. The Lieutenant-Governor observes in the resolution that the reorganisation has not achieved the success anticipated for it, states that a change has already been effected in its management, and hopes that it may yet justify its existence.

(g) in the Central Provinces.

359. There was previously a civil engineering class attached to the arts college at Jubbulpore in the *Central Provinces*. It was unsuccessful and has now been abolished. Instead, a school for the instruction of civil and mechanical engineers is in course of erection at Nagpur.

Survey schools.

360. Survey schools are frequently attached to technical schools. The training in these institutions is for general purposes.

The Survey of India trains its own men. Officers of the provincial service have been trained for the first year of their service under a senior provincial officer at Dehra Dun, instruction being given in triangulation, plane-tabling, traversing, levelling, computing, drawing and printing. On completion of this course they are posted to parties where they continue their training and at the same time undertake a certain amount of useful work. Each topographical circle has had a senior provincial officer holding the appointment of survey instructor in the circle. The upper subordinates and a certain number of the lower subordinates have, before being posted to parties, been trained for a year by the instructor of their circle. The remainder of the lower subordinates have been posted direct to parties and have been trained entirely in their party.

V.—Agriculture.

Administrative changes.

361. The dawn of the new era in agricultural education as a result of the progressive policy of the Government of India with reference to agriculture was adumbrated in the fifth quinquennial review. The measure of the progress made during the past quinquennium is the extent to which the proposals outlined have materialised and the efforts to supply a higher agricultural education have been successful in attracting students desirous of such a training. Before proceeding to a detailed examination of statistics by provinces it may be convenient to indicate the administrative and other changes which have taken place in the department of agriculture since the last quinquennial report was issued. The post of inspector general of agriculture in India ceased to exist as a separate appointment from the 1st April 1912. The functions of the inspector general of agriculture in India are now exercised by the director of the Agricultural Research Institute and principal of the Agricultural College, Pusa, under the title of " Agricultural Adviser to the Government of India and Director of the Agricultural Research Institute, Pusa." He maintains the same position with

respect to Local Governments as was held by the inspector general of agriculture in India and his duties remain as before, except that he also discharges the duties of director of the Agricultural Research Institute, Pusa. In the provinces a mycologist and an entomologist have, during the quinquennium, been added to the staff of the Madras department of agriculture. The total number of officers in the Indian agricultural service is now 67 as against 55 at the end of the last quinquennium. There are now over 90 experimental farms and demonstration plots established in various parts of the country, in addition to botanical gardens and cattle farms controlled by the agricultural department. As a result of the development of the scheme for higher agricultural education, competent subordinate staffs have been recruited in all provinces for the supervision of farms and demonstration plots and to assist in the teaching and research at the Pusa Research Institute and in the provincial colleges.

362. The proposal to establish an agricultural college in Burma has been postponed for the present owing to the financial position of the province. It is also considered preferable, in the present state of general education in the province, to confine teaching in agricultural science and practice to short vernacular practical courses for actual cultivators. There are no agricultural colleges in Assam or Bengal. The Sabour Agricultural College, which was formerly under the Government of Bengal, has, owing to the recent territorial changes, come under the administration of the Government of Bihar and Orissa. But it receives students from the three provinces of Bengal, Bihar and Orissa and Assam and trains men for the departments of agriculture in these three provinces. *Colleges.*

363. The Pusa Agricultural College and Research Institute was opened for students in July 1908. The teaching provided is of two kinds: (1) post-graduate courses for two years in agriculture, chemistry, botany, mycology and bacteriology and for one year in entomology, and (2) special courses for short periods in subjects such as the management of cattle, poultry, fruit growing and lac and silk production. The post-graduate courses are primarily intended for graduates of provincial colleges who wish to specialise in a particular subject with a view to obtaining assistant professorships or lecturerships in provincial institutions. The members taking these courses will, therefore, always be, to a large extent, limited by the number of appointments available, as provincial directors naturally only send students for whom they can guarantee appointments, while this source of recruitment will annually decrease as provincial departments become fully equipped. It is gratifying, however, to find that private students are now applying for admission to the post-graduate courses, and, though the total number of such private students is, so far, small, their presence is an indication of a genuine demand for higher scientific training for agricultural purposes. (*i*) *The Pusa Agricultural College.*

Apart from the prescribed post-graduate courses in special subjects and in order to meet the definite requirements of provincial departments which are not in a position to train their own men for such appointments as assistant director, farm manager and the like, post-graduate students have been admitted to a general course including a period of study in each of the chief sections as well as practical work on the farm. It has, however, been held by the board of agriculture that, ordinarily, students requiring a practical agricultural training are best provided for in the six provincial colleges, and, now that these are all in full working order, it is not expected that there will be much further demand for the post-graduate general course.

The instructive staff consists of the director and principal of the college, who is also agricultural adviser to the Government of India, an agricultural chemist, a mycologist, an entomologist, an economic botanist, an agriculturist, an agricultural bacteriologist and a pathological entomologist. All these are imperial officers.

Students are trained in one or other of the following sections of agricultural science :—

Agricultural chemistry.—Methods and principles of advanced research.

Mycology.—(*a*) Revisionary course in plant anatomy and physiology, (*b*) general mycology, and (*c*) pathological mycology.

Economic entomology.—(The course in this subject is for one year.)

Economic botany.—(*a*) Physiology of plants, (*b*) the improvement of plants, (*c*) the principles of Indian fruit-growing, (*d*) practical application of the principles of plant improvement and a general knowledge of the planting, cultivation and improvement of plants which are of special economic importance in their respective provinces.

Agriculture.—(*a*) A course in general agriculture and (*b*) special instruction in the management of field and garden crops and orchards and in the use of agricultural machinery, tools and implements and in cattle, sheep and poultry breeding and management.

Agricultural bacteriology.—(1) A complete two years' course of training in bacteriological technique as applied to soil bacteria. (2) A course in special methods of biological analysis of soils (to be included in course no. (1) and specially intended for agricultural chemists who may not have time to take the full course). (3) A course in bacterial diseases of plants to be taken up in the second year by such students as may show special aptitude for this line of research.

Short courses of instruction are also given in cattle breeding and poultry management, fruit culture, lac and silk production and in apiculture.

In 1908-09, the year in which the college was opened, the number of students enrolled in the post-graduate course was nineteen. It is now seven. The number of those who have successfully completed the course during the four years is nine. The students taking short courses have numbered during the four years 2, 49, 59, and 33 respectively, and all these have successfully completed their courses.

The reduction in the number attending the post-graduate courses is due to the fact that when the institute opened for teaching, provinces sent up, for a revisionary course, men who had already obtained some training in the agricultural institutions which then existed, so as to obtain assistants for the colleges which had just been opened. The demand for men has also, up to the present, been so great that provincial colleges have at once given appointments to the best of their students, without insisting on any post-graduate course, and have frequently withdrawn students deputed to Pusa before the completion of the course for which they were deputed. In addition, as the provincial colleges have not been open long, the supply of graduates for whom the post-graduate courses are intended has been very limited. Eventually it may be possible to insist on a post-graduate course at Pusa as a condition of appointment to the higher grades of the provincial agricultural service. The total expenditure has risen from Rs. 2,89,823 in 1907-08 to Rs. 3,19,860 in 1911-12.

(ii) The Poona College.

364. The Poona Agricultural College, as distinct from the Poona College of Science, was constituted as a separate institution on the 1st January 1908. The college remained in its temporary quarters during the whole of 1908 and the early months of 1909 while the new college buildings were under construction. During the year 1911-12 the college was fully accommodated in its new buildings. The main college block was opened by His Excellency Sir George Clarke (now Lord Sydenham) on July 18th, 1911. The teaching staff of the Poona College of Agriculture consists of professors of chemistry, agriculture and botany and zoology with 11 assistant professors, lecturers and demonstrators. The college is affiliated to the Bombay University which confers a degree of bachelor of agriculture (B.Ag.) on the basis of the three years' course of instruction at the College of Agriculture.

The number of students varied but little during the quinquennium, and is now 104 as it was in 1907-08. Fifteen of these are studying a short course which was first started in 1909, is intended for farmers' and land-owners' sons

and offers a practical training in the best methods of agriculture applicable to the province. The number of those who have passed the B.Ag. examination during the quinquennium is 134. The expenditure on the college has risen during the quinquennium from Rs. 23,036 to Rs. 94,500.

365. The Agricultural College at Coimbatore was opened on the 14th July 1909 by His Excellency Sir Arthur Lawley, Governor of Madras. The European staff consists of a principal and professor of agriculture, professors of agricultural chemistry, botany, mycology and entomology and a full establishment of assistant professors and lecturers. The Madras college has been more successful than any other in India in obtaining a large proportion of students of the desired class: about half being the sons of land-owners whose object is to acquire a knowledge of practical farming which will enable them to manage their own properties to better advantage. *(iii) The Coimbatore College.*

The number of students has risen from 18 to 50. The number of those who have successfully completed the 3rd year course was 34 during the quinquennium. The expenditure has risen from Rs. 68,453 to Rs. 95,975.

366. Up to 1909 the only provincial institution which provided a higher agricultural education for the present provinces of Bengal, Bihar and Orissa and Assam was the Sibpur Engineering College. In view of the opening of the agricultural college at Sabour, it was arranged that the agricultural classes at Sibpur should be finally discontinued in 1909. Owing, however, to delay in construction, the opening of the Sabour college had to be postponed for a year and there was a consequent hiatus. To bridge this and to secure some continuity in agricultural training, students from Bengal were given scholarships to enable them to study at the Poona, Cawnpore and Nagpur colleges of agriculture. At the end of the agricultural year 1909-10, the Sabour college was practically ready to commence work, and it was opened on the 3rd November 1910 by His Honour the Lieutenant-Governor of Bengal. *(iv) The Bihar and Orissa College at Sabour.*

The staff of the college consists of a professor of economic botany who is also principal of the college, a professor of agricultural chemistry and a professor of agriculture with a full staff of assistant professors and lecturers. The subjects taught are agriculture, chemistry, botany, mycology, entomology, physics, mathematics and veterinary science. In addition to the three years' course qualifying for the college diploma, a short six months' course in practical agriculture is also given. This course is for the benefit of land-owners' and cultivators' sons and is confined to this class: it is strictly practical and the lectures are given in the vernacular.

The number of students admitted during the first year (1910-11) was 21. This, however, did not count towards the diploma course which began from June 1911. In 1911-12 there were 18 students, all of whom passed the annual examination in March and were promoted to the second year class. It may be noted that 41 applications were received for admission to the college in June 1912. Only 11 of the applicants joined: the remainder withdrew their applications on realising that a government appointment did not necessarily follow the acquisition of the college diploma.

The expenditure on the college during 1910-11 amounted to Rs. 66,094 and that for 1911-12 to Rs. 82,000.

367. Although the Cawnpore College and Research Laboratories were not formally opened till the 11th November 1911, work had been carried on for some time previously in the building and teaching had been greatly facilitated by the excellent laboratories. In 1907-08 the instructional staff had been brought almost to its full strength, consisting as it did of professors of agriculture, economic botany and agricultural chemistry with a full staff of lecturers and assistant professors. The first diploma examination was held during the session 1908-09: and, in this year, the college reached its full numerical strength. *(v) The Cawnpore College.*

Whilst no difficulty is experienced in filling the college with students, constant regret is expressed that the various land-holders' associations are slow to send students for training as land agents, even although such candidates are admitted on preferential terms. But the general quality of the

students, it is reported, tends to improve: and it is hoped that the proportion of students connected with the land may increase.

The college is under the administration of a governing body including a non-official element. This arrangement seems to work satisfactorily.

The staff of the college consists of 3 professors, 1 assistant professor and 5 lecturers. The number of students has risen from 103 to 122 and attained 153 in 1908. During the quinquennium 145 students have successfully completed the course. The expenditure has risen from Rs. 63,329 to Rs. 77,800.

(vi) The Nagpur College.

368. During the greater part of the quinquennium, the Nagpur College has suffered from inadequate laboratory accommodation and a slight restriction of teaching staff. Teaching, however, was carried on regularly. There has been some difficulty in obtaining local students. The terms of admission were relaxed and it was proposed to admit such non-matriculates—the sons of cultivators—as could pass an entrance test equivalent to the matriculation standard. This scheme did not, however, prove a success. It is noted that the agriculturists of the Central Provinces do not appear to take kindly to higher agricultural education.

There are three professors on the college staff: a professor of agriculture, of agricultural chemistry and of economic botany. There is also a staff of assistant professors and lecturers. The enrolment has increased from 23 to 58 and 38 students have successfully completed the 3rd year course. The expenditure has risen from Rs. 24,928 to Rs. 38,860.

(vii) The Lyallpur College.

369. Although the Lyallpur College was not opened till September 1909, the anticipation of its foundation created a large amount of local interest. No less than 574 applications for admission were received, and of these a fair proportion came from land-owners and others whose main object was to acquire a scientific knowledge of agriculture. This preliminary enthusiasm was, however, damped by the decision to restrict the number of admissions, in the first year, to 16 as the teaching staff had not been fully recruited and trained in its duties. Ten open scholarships, two in each division, each of the value of Rs. 10 per mensem, were founded by the Local Government. Rai Sahib Mohan Lal founded a scholarship of Rs. 12 per mensem in memory of the late Sir Denzil Ibbetson, and Chowdhry Sultan Ahmed, extra assistant commissioner, endowed a silver medal to be named the "Sir James Wilson" Medal. The fees were raised to make the cost of the diploma equal to that of a B.A. degree. The boarding house fees were based on such a scale as to cover all expenses. This clear indication that the college course was not to be used as an easy and comparatively cheap road to government employment had its effect in a large decrease in applications for admission. The director of agriculture in his report for 1910-11 remarks that "the college is not popular with the classes we wish to attract, nor indeed with any class. It will not become popular until either the educated members of the agricultural classes begin to place an independent career above government service, or government holds out special prospects to those who obtain the diploma of L.Ag. By offering the latter temptation we could fill the college, but we should petrify its spirit."

A short practical vernacular course was started in October 1912, and the financial commissioner sanctioned the preparation of schemes for the improved farming of the large estates under the court of wards. Students who have obtained the diploma will be available for employment as agricultural experts on these estates.

The college staff consists of a professor of agriculture, of agricultural chemistry and of economic botany—each with an assistant, and an assistant professor of entomology. Lectures are also given in physics, mathematics, land revenue and surveying, agricultural engineering and veterinary science—the last two subjects by a member of the public works department and by the superintendent, civil veterinary department.

When the college opened in 1908 it had 16 students, in 1910-11 it had 65 and now it has 49. Eight students have passed the 3rd year course. The expenditure has risen from Rs. 57,561 in 1908-09 to Rs. 64,640.

370. Experience is already showing that the courses originally prescribed in the standard curriculum for provincial agricultural colleges, as laid down by the board of agriculture and amended in 1908, are, in most cases, not suited to the class of students that the colleges are intended for. Provincial reports are almost unanimous in tone. In Bombay, while the percentage of passes in the examination is high, the question of the utility of, and demand for, the course is obscured by its being made a road to a degree. College graduates or the subordinate staff have with very few exceptions continued to show no power to develop any original turn. In Madras there is noted in graduates "a lack of intelligent inquisitiveness and power of independent thought." Similarly in the Punjab "there is too much cram and too little power of practical application." *Syllabus in agricultural colleges.*

The division of the course into two parts and its extension to four years has been proposed, and there is no doubt that if the full course as prescribed by the board of agriculture is to be properly taught such an extension is absolutely necessary in every province. The Coimbatore College has already arranged for a preliminary two years' course which is to be agricultural, with lectures on popular science but no laboratory work. If the course of popular science is to receive an agricultural bias by the use of the phenomena of agriculture as a framework for the teaching of elementary science, the experiment is likely to give very valuable results from the point of view of rural secondary education.

On a general review of what has been achieved during the quinquennium it may perhaps be said that so far the most promising line of development in connection with the colleges is to be found in the extension of practical instruction which may vary from the mere demonstration to cultivators on their own land, up to a regular course for students on the farm attached to a college.

For some time to come, as is, to a large extent, the case in Great Britain, the prospect of employment in the higher grades of the agricultural service will limit recruitment for the diploma course: though ultimately there is hope that the colleges will attract genuine students for agricultural science' sake and the wealthier class of land-owner who will prefer a science course bearing on his life's work to a purely literary one.

371. In 1910 the Government of India accepted the proposal of the board of agriculture that passed students should be entitled licentiates of agriculture (L.Ag.). This degree will be recognised in all official publications. It has been left to each Local Government to decide what classes of appointment in government service should be thrown open to candidates who have obtained a degree from one of the agricultural colleges. *The agricultural degree.*

In this connection the question of the affiliation of agricultural colleges to the provincial universities was also considered. The conclusions arrived at are contained in the following extract from the Government of India resolution of the 4th January 1910:—

"The Government of India did not consider that such affiliation was necessary at present. They thought it preferable that each agricultural college should be controlled by the director of agriculture with the advice of the director of public instruction. With the exception of the Government of Bombay all Local Governments and Administrations agree that affiliation is not desirable. In Bombay the circumstances are exceptional. The Poona College of Science has long been affiliated to the Bombay University for the purposes of examination for the existing L.Ag. degree and with the full concurrence of the Government of India it has been decided to continue an arrangement which has worked admirably in the past. But in all other provinces the principle may be accepted that the colleges should not apply for affiliation to the provincial university, and that for the present at any rate they should remain under the control of the directors of agriculture. The only further question is how far the director of public instruction should be associated in the control of the college. The Government of Madras are impressed by the risk that a system of dual control may lead to friction and want of continuity of policy, and they urge that while the director of agriculture should always be at liberty to consult the director of

public instruction, no rule requiring him to do so should be laid down. The Government of India have no wish in such a matter to restrict the discretion of Local Governments. But the question of the best means of co-ordinating agricultural education with general education is likely to become increasingly important in the future and they would draw attention to the great importance of arranging to keep the agricultural and educational departments in close touch with one another in such manner as may be most suitable in each province."

Text-books.

372. The following text-books have been published during the quinquennium :—

(1) Indian Agriculture by the late N. G. Mukerji, M.R.A.S. (2nd edition).

(2) First Principles of Agriculture by F. Smith, B.Sc., F.H.A.S., deputy director of agriculture, Bengal.

(3) Indian Insect Life by Lefroy and Howlett.

(4) Wheat in India by Albert and Gabrielle Howard.

(5) A Hand-book of Agriculture for Burma (in English and Burmese), revised by the director of agriculture, Burma.

In addition, many leaflets and bulletins of an educational nature have been issued by the various departments of agriculture.

College libraries.

373. An important educative factor which has accompanied the expansion of facilities for higher agricultural education has been the provision of well-equipped libraries. At Pusa there is an excellent library of some 10,000 volumes containing standard works on all branches of agricultural and cognate sciences. It is largely used by the staff and by the students : while arrangements have also been made by which books are issued from the library to scientific workers in the provinces, whether connected with agricultural or with other scientific investigations. Advantage is freely taken of this arrangement. Similarly every provincial college and department has a well-equipped library which is kept up to date by the addition of any new publication of importance : and these are also, as a general rule, available for any scientific worker in the province. At Cawnpore a combined library for the agricultural college and the technological institute is under construction.

Rural education.

374. The broad principles upon which the agricultural education of the cultivating masses has been based are enunciated in paragraphs 554 and 555 of the last review. The past quinquennium has been marked by a consistent effort in all provinces to get into touch, by educative methods, with the actual cultivator and the sons of cultivators. Thus, in *Bihar and Orissa*, a short six months' course in practical agriculture is given at Sabour for the benefit solely of land-owners' and cultivators' sons. Lectures are given in the vernacular and the course, which is strictly practical, is said to be popular with the people and to meet a real want. Similarly the sons of cultivators were received for practical training at the agricultural stations at Cuttack and Bankipur. Agricultural classes held at the Gaya Zilla School and the Dumraon High School, however, proved a failure probably because there was little likelihood of pupils returning to the land. Nature study has been encouraged in the *guru*-training schools, middle English and primary schools in Orissa by the grant of medals and diplomas by the agricultural department. This is an experiment at present confined to Orissa : but, if successful, it will probably be extended to other divisions. Again, classes for the training in arboriculture of overseers, sub-overseers and other subordinates of district boards are held at the Sibpur Botanical Garden. Sericultural classes for the sons of *bonâ fide* silk-rearers are held at Berhampur and Rajshahi. Little progress has been made in promoting agricultural education in schools, though a beginning has been made.

Bengal enjoys the same facilities for special courses in sericulture and arboriculture as Bihar and Orissa. During 1911-12 an attempt was made, both in Western and Eastern Bengal, to encourage nature study in elementary schools. Gardens have been attached to a considerable number of schools : seeds and simple apparatus for the illustration of the lessons have

been provided and manuals in the vernacular prepared for the guidance of teachers. It is too early to judge of the success of these measures; but some encouraging reports have been received.

In *Assam*, nature study is taught in primary schools. A new course has been introduced which differentiates between urban and rural schools and aims at providing for the pupils of each an education suited to their needs. Apprentices are trained at government farms for the post of fieldmen demonstrators.

In *Bombay* the short course for the benefit of land-owners' and farmers' sons forms an integral part of the educational scheme. There is a real demand for this course and the number of suitable candidates tends to increase. For this course a vernacular agricultural school was established at Poona in 1910. A school building and quarters for a vernacular school have been erected at Mirpurkhas in the Thar and Parkar district, Sind, where a 12 months' course in agriculture for the sons of zamindars, about 20 years of age, will be provided. The establishment of similar schools in the Deccan, southern Maratha country and Gujarat is under consideration.

In the *Central Provinces* short courses of practical instruction are given on the Powarkhara and Raipur farms and have met with great success. On the Raipur farm the training given is mostly in the transplanting of rice. Short courses are also given to wards and court of wards officials. The training of *kamdars* to demonstrate improvements on *ryots'* lands is one of the most important factors in the department's efficiency. The Nagpur *malguzari* class, formerly attached to the agricultural college, has, however, come to an end with the withdrawal of scholarships which appeared only to attract candidates who desired an easy means of access to service in tahsil and district offices. Practical instruction in definite improved local methods, with the minimum of explanatory theory, appears to be more useful, and classes with this object are being extended.

An important branch is the training of normal teachers so as to qualify them to teach "nature study." During 1908-09 twenty-three normal schoolmasters were trained at the agricultural college: the class was then discontinued as a course of "nature study" was introduced into four of the normal schools.

In the *United Provinces* applications are occasionally received from small zamindars and others for practical training in agriculture. To meet such cases, a small number have been admitted to the Cawnpore farm to enable them to gain an acquaintance with the methods pursued. The Rural Education Committee has introduced into village schools a series of object lessons dealing with insect life. The Eri silkworm has been chosen as the most suitable subject. Considerable attention is given to the provision of facilities for the training of engineers and sugar boilers for sugar factories. A grant was given to the owner of a factory at Pilibhit, one of the conditions of which was that he should receive for training a certain number of apprentices approved by government. In addition, special courses for training in sugar manufacture are, from time to time, organised at suitable centres. Courses of training in horticulture have been organised at Lucknow and Saharanpur. The farms are always willing to receive and train farm labourers if they are sent. Wages are paid, but few avail themselves of the opportunity. Courses for cultivators at experimental farms have not been tried systematically owing to the fear that cultivators are likely to be more impressed by experimental failures than by experimental successes.

In the *Punjab* lower agricultural education is at present limited to classes for instruction in the use of reapers and improved implements. Short practical courses have also been started at Lyallpur for the sons of *bonâ fide* cultivators.

In *Burma*, in the absence of an agricultural college, a scheme has been sanctioned for the creation of a staff of district vernacular agriculturists recruited mainly from the settlement and land records departments to serve as intermediaries between the agricultural department and co-operative credit societies as well as the public generally. Classes for the training

of this staff were also open to the general public and a considerable number of the sons of *bonâ fide* cultivators availed themselves of them. School gardens are extending in Burma: and a manual of school gardening has been prepared. The agricultural department gives what assistance it can in the organising of these schools. But it is doubtful if much progress can be made till facilities are provided for the systematic training of normal school pupils in nature study and the elements of agriculture. Anything so far achieved has been by special arrangement.

VI.—Forestry.

General organisation.

375. Forests covering approximately a quarter of the Indian Empire are under the control of the forest officers of British India and the native States, and the steady growth of this vast area is accompanied by the ever-increasing need for its more detailed and scientific management. It is not surprising, therefore, that the period under review has been one of almost exceptional development in education in forestry. The officers who receive their forest education in India are divided into three main classes:—

(*a*) deputy rangers, foresters and forest guards who constitute the lowest grades of supervising officers;

(*b*) rangers; and

(*c*) members of the provincial forest service.

Training of deputy rangers and foresters.

376. For the first class the training, prior to 1907, was provided by vernacular classes at the Dehra Dun and Tharrawaddy forest schools, but in that year these classes at Dehra Dun were abolished, and arrangements have since been made in all the principal provinces for vernacular instruction to be provided in provincial classes or schools, subordinates from Bihar and Orissa being for the present trained at the Kurseong Forest School in Bengal.

Training of rangers.

377. As regards rangers, those for the Burma service received till 1907 a vernacular course at Tharrawaddy, and those for the rest of India an English course at Dehra Dun, the period of training in each case being two years. In 1908 the instruction at the Burma school was improved and given in English, while in 1912 the demands on Dehra were relieved by the constitution of a forest college at Coimbatore, which will ultimately provide all the requisite instruction for candidates from southern India.

Training of provincial officers.

378. Still greater progress has been made in connection with the provincial service in consequence of an arrangement made in 1906, by which the members of this service, who had previously been selected exclusively from the lower staff, were in future to be selected to a large extent from candidates for direct appointment. In 1907 a third year course (in extension of the two years' rangers' course) was provided at Dehra Dun for such candidates, and in 1912 an entirely separate two years' course for provincial officers was substituted for the former combined arrangement.

379. These changes are the result of a policy deliberately undertaken by the government in 1906 for the improvement of scientific and technical education in forestry. As a consequence of this policy the old vernacular classes at Dehra Dun were abolished and the school raised to the status of a college. At the same time provision was made for a research institute to be worked in conjunction with and under the same management as the college. The conjunction of the college and institute has been productive of excellent results and, owing largely to the establishment of the latter, it is now possible to give in this country an education in forestry, which is of a much higher class than that obtainable formerly, and which may in time approximate to that obtainable in Europe.

The Research Institute and College at Dehra Dun.

380. The institution known as the Research Institute and College at Dehra Dun is under the administrative control of the inspector general of forests, who is assisted by the board of forestry, which meets triennially. The board of control referred to in the last review was abolished with effect from 1913. The staff consists of the president, the research officers, and the instructors. The president, who is usually a conservator, is charged with the general administration of both the institute and college, but is not connected with any

particular branch of research or study. The research officers comprise a sylviculturist, a forest botanist, a forest economist, a forest zoologist, and a forest chemist. The post of chemist is at present in abeyance. The research officers devote the greater portion of their time to research work, but during the rainy season they are also required to give lectures in their special subjects to the provincial service class. Almost up to the close of the period under review there were only four instructors, all members of the provincial service; but, partly because this arrangement proved to be not entirely satisfactory and partly owing to the introduction of the separate two years' course of training for the provincial service, it was found necessary to increase the staff to six, four (instructors) belonging to the imperial and two (assistant instructors) to the provincial service. Their principal duties, in addition to class-work at headquarters, are the supervision of the practical training in the forest and the maintenance of discipline.

The students fall into the following categories :—

(*i*) Private students; usually men who hope, on obtaining the college certificate, to secure state or other employment.

(*ii*) Government probationary students, who may be stipendiary or non-stipendiary, and who have been selected by Local Governments for employment, subject to their completing the course of training satisfactorily.

(*iii*) Students deputed by native (and occasionally foreign) states and British colonies.

(*iv*) Students already in government service, usually forest subordinates.

The numbers in the rangers' and in the provincial service classes were, in 1907, respectively 45 and 7; in 1912, they were 55 and 15. Of the students in 1912, only one fell under class (*i*), none were non-stipendiary government students. Seven fell under class (*iii*), and the remainder were government stipendiary students. Twenty were Europeans or of the domiciled community, against six in 1907; one was a Siamese; the rest were Indians.

All students, except those already in government service, must ordinarily be between the ages of 18 and 25 on admission to the college, and must have undergone a period of practical training in the forests of the province from which they come. Rangers deputed for training must be under 30 years of age, and subordinates of lower rank must have completed two years' service and be under the age of 25.

Candidates for both courses must have a knowledge of English fully adequate to follow the course of instruction. For the provincial service course they are expected to know what is usually included in the term 'lower mathematics.' Local Governments may prescribe any other educational qualifications considered necessary, and the Government of India have, in this connection, emphasised the importance of at least a preliminary education in science. Candidates for the rangers' course must ordinarily have passed the matriculation, or its equivalents such as the European high school examination and the school leaving certificate, or a higher university standard.

The course of study (including vacations) extends over a period of two years, of which almost half is spent in camp. The teaching of late years has been more thorough, more comprehensive, and more up to date than in the past, though the classes have perhaps been rather too large to permit of that individual attention to the students, which is so essential if the best results are to be obtained.

The subjects taught in the provincial service course are as follows :—

(1) Forestry, including sylviculture, utilization, and forest working-plans, both theoretical and practical, and forest mensuration.

(2) Physical science, including chemistry, physics, physiography, geology, mineralogy, and soils.

(3) Botany, both theoretical and practical, including the collection and preservation of plants.

(4) Zoology—the classification of animals and the study of useful and dangerous species, especially of insects, and the collection and preservation of specimens.

(5) Drawing, surveying, and estimating, as required for forest officers.

(6) Forest engineering, theoretical and practical.

(7) Forest law—the elements of criminal law, and departmental organization.

(8) Forest accounts and procedure.

The curriculum for the rangers' course is similar, but less advanced. Mineralogy and zoology are not taught, but instruction in arithmetic, elementary algebra, and mensuration, with special reference to their application to forest questions, is included.

Periodical and final examinations are held, the final examination counting for half the total number of examination marks allotted. Marks are also given for scientific collections, survey drawings, conduct, discipline, and application. The nature of the certificate awarded is determined by the total number of marks obtained.

Pass certificates are given in the provincial service class on 60 or more per cent. of the marks in each major subject and 60 per cent. of the total; honours certificates on 60 per cent. in each major subject and 75 per cent. of the total.

In the rangers' course, a lower standard certificate is given for pass marks in each major subject and 45 per cent. of the total, a higher standard on the same and 60 per cent. of the total, honours for 50 per cent. in each subject and 75 per cent. of the total.

The minimum cost of training, including subsistence money, uniform, books, camp outfit, and travelling expenses (exclusive of journeys by rail or steamer), may be estimated at Rs. 80 to Rs. 100 per mensem for the provincial service students and at Rs. 50 to Rs. 60 per mensem for the rangers' class, the cost for a European being somewhat higher than for an Indian.

The award of stipends is limited to Rs. 2,400 and Rs. 1,200 for the provincial service and rangers' courses respectively, the whole or part of which may be paid in a lump sum on the production by the student of such certificate as may have been agreed upon. The expenditure on stipends has risen from Rs. 51,515 in 1907 to Rs. 93,354 in 1912, and totals nearly four lakhs for the quinquennium.

The total expenditure under all forest heads incurred on the Forest Institute and College has risen from Rs. 1,65,158 in 1907 to Rs. 2,62,626 in 1912.

Rangers' class. In the rangers' class, 33 appeared at the examination in 1907, and 52 in 1912. In the former year, two failed and one honours certificate was awarded; in the latter, one failed and eight honours certificates were awarded. The provincial service examination was first held in 1909-10, when all six candidates passed; in 1912, all fifteen candidates passed.

The Burma Forest School. 381. The Burma Forest School was established in 1899 at Tharrawaddy, mainly because the vernacular course of instruction given in Urdu at Dehra Dun could not be followed by candidates from Burma. In 1908, following on a suggestion made by the Government of India, an English course was started, and, as Tharrawaddy was considered an unsuitable locality, the school was, in 1910, moved to Pyinmana. The rules regulating the constitution of and studies and discipline at the Burma school closely follow those for the Forest College at Dehra. The chief conservator replaces the inspector general of forests as administrative officer, and is assisted by a board consisting of the director of public instruction, two conservators, and the director of the school, who occupies a position analogous to that of the president at Dehra Dun. The staff assisting the director are two instructors (usually one from the imperial and one from the provincial service), a verna-

cular instructor belonging to the provincial service, and an assistant vernacular instructor and curator, who is usually a ranger.

The courses of instruction last 23½ months. The syllabus for the English course is the same as that for the rangers' class at Dehra Dun, but excludes arithmetic. The vernacular course is similar but more elementary, and includes arithmetic. The system of examination and marking is as at Dehra Dun. Pass and honours certificates are awarded, the former to students who obtain over 50 per cent. of the total marks, including 50 per cent. of the marks allotted to each of the subjects—forestry, botany, surveying and engineering, and the latter to students obtaining over 75 per cent. of the total marks and 50 per cent. in each subject.

The number of students admitted yearly is decided by the amount of accommodation available. The maximum number that can be trained at one time is 60, 10 in the English and 20 in the vernacular course of each year. There are only two categories of student: (*a*) stipendiary students and (*b*) students already in government service. For upper (*i.e.*, English) class students the rules of admission, both as regards age, educational qualification, and preliminary practical training, are similar in almost all respects to those for the corresponding categories of students taking the rangers' course at Dehra Dun. Failing the production of a certificate of having passed the VIth standard examination, candidates for the lower class are required to pass a simple entrance examination.

382. As the Coimbatore College was not opened till the 1st July 1912, it is unnecessary to say more than that it provides instruction to candidates for appointment as rangers, and that the course of instruction and the rules for admission are almost identical with those at Dehra Dun. It has been established with the object of training the ranger staff for Southern India, thereby relieving the pressure on the parent institution. *The Coimbatore Forest College.*

383. Provincial schools and classes have now been established in almost all provinces with the object of improving the qualifications of the lower ranks of the subordinate establishment, *i.e.*, deputy rangers, foresters and forest guards. The scope of the instruction given varies slightly, but is in the main practical. A statement of these schools and classes is given in appendix XXII. They are ten in number, and train rangers, deputy rangers and guards. *Provincial schools and training classes.*

VII.—Veterinary science.

384. The great development which took place in the agricultural administration after 1905 was accompanied by a similar development in veterinary matters. The civil veterinary department, having been relieved of the greater part of the work connected with horses and mules in 1903, had become free to devote itself to a more purely agricultural sphere of duty, and it shared with the agricultural department in the developments initiated in 1905. The changes then effected were mainly in the direction of an increase of staff, the number recruited in this country rising from 408 in 1904 to some 911 officials in 1911-12. As the demand for veterinary education in India is almost entirely confined to candidates for the public service, the increased recruitment led to a largely increased demand for veterinary education. To meet this demand, the existing colleges were considerably reorganised and their equipment much improved. Information on this point up to 1907 was furnished in the last quinquennial review. Progress since 1907 has naturally been slower, but, as the details given below for each college show, the improvement both in organisation and equipment has continued. *Institutions.*

The following are the institutions at present existing :–

(1) Punjab Veterinary College, Lahore.
(2) Bombay Veterinary College, Parel, Bombay.
(3) Bengal Veterinary College, Belgachia, Calcutta.
(4) Madras Veterinary College, Vepery, Madras.
(5) Burma Veterinary School, Insein.

385. The number of veterinary graduates who passed out from the veterinary colleges during the quinquennium and the number of students who attended during 1911-12 together with corresponding figures for the previous quinquennium and for 1906-07 are given below :—

	Number of students attending during 1906-07.	Number of students attending during 1911-12.	Total number of graduates passed out during the years 1902—1907.	Total number of graduates passed out during the years 1907—1912.
Punjab . .	259	196	209	324
Bombay . .	111	88	59	107
Bengal . .	104	123	65	154
Madras . .	90	51	29 in 2 years	76
TOTAL	564	458	362	661

Whilst the number of graduates who have passed out from the colleges during the quinquennium has very greatly increased, there has been a considerable falling off in the number of students attending the colleges. More care has been exercised in selecting candidates for admission to the colleges and great difficulty has been experienced in obtaining students who possess the educational qualifications required. In spite of the great increase in the number of graduates the demand for qualified veterinary assistants, and for the higher grades of provincial officers, such as deputy superintendents and veterinary inspectors, continues to exceed the supply. There is not at present any institution corresponding to the agricultural institution at Pusa, where the highest class of veterinary instruction can be given, and until such instruction is provided it will be difficult to procure in India a class of men suited to fill the higher posts of the department. A beginning has, however, been made in making this higher class of instruction available, and post-graduate courses have, as stated above, been instituted at the Punjab, Bombay and Bengal veterinary colleges. The following table compares the existing strength of the subordinate veterinary staff in each province with the staff which has been sanctioned :—

Province.	EXISTING STAFF.			SANCTIONED STAFF.		
	Deputy Superintendents.	Veterinary Inspectors.	Veterinary Assistants.	Deputy Superintendents.	Veterinary Inspectors.	Veterinary Assistants.
Madras	1	2	66	3	15	132
Bombay (including Sind) . .	8	3	55	8	24	215
Bengal	6	15	61			
Bihar and Orissa . . .	...	5	62	11	38	349
Assam	...	2	24			
United Provinces . . .	...	16	140	2	20	210
Punjab	...	15	169	...	24	170
Burma	...	13*	118	5	12	120
Central Provinces and Berar .	...	6	90	...	8	120
North-West Frontier Province .	...	2	26	...	2	26
Rajputana	..	...	3	....	...	3
Baluchistan	...	1	2	...	1	9
TOTAL .	15	80	816	29	144	1,354

Individual institutions.

386. The Burma Veterinary School deals with a class of students outside the reach of the Indian colleges, and the Punjab Veterinary College with a large number of military students. The bulk of the instruction at the Punjab Veterinary College and the whole of that at the Burma Veterinary School is in the vernacular. In the other institutions, the reading is in English. The course in all the colleges extends over a period of three years and successful students obtain a diploma. None of the colleges is affiliated to a university, but they are all controlled by the Local Government concerned through the agency of the agricultural department. The professors at the various colleges are drawn from the civil veterinary department and are helped by trained Indian assistants. The whole staff is ordinarily engaged on teaching and demonstration, but each college is equipped with laboratories which are used,

* One laboratory assistant attached to the Insein School.

not only for demonstration, but also for purposes of diagnosis and research. The courses of instruction at the various institutions and particulars of the teaching staff employed are given below.

387. The *Punjab* college is still the largest of all the veterinary colleges. The average number of students attending the college during the quinquennium was 238 and the average number who graduated 65. The additions which were made to the buildings during the quinquennium consisted of six stalls and a *post-mortem* room erected in the segregation ward. As it was found that the classes had outgrown the capacity of the staff, two imperial officers have recently been added to the latter, a post-graduate professor and a professor of pathology and parasitology, in addition to four assistant professors and three demonstrators. The sphere of work of the research laboratory attached to the college has been largely extended. *Punjab Veterinary College.*

388. During the quinquennium the new *Bombay* college building, one of the finest and best in India, was completed and occupied, as were also a hostel with accommodation for 76 students and quarters for Indian professors. The pharmacy was extended and the *post-mortem* room improved. A new cattle-operation shed was built and the dog ward reconstructed. The staff of the college was recently reorganised and an assistant professor added to it. Provision has also been made for holding a post-graduate course. The library is reputed to be thoroughly up to date. The work at the patho-bacteriological laboratory has greatly increased and the laboratory has been fully used for diagnostic purposes and minor research. Microscopes have been purchased for the pathology and histology classes and many new specimens have been added to the collections at the museum. The average number of students who attended the college during the quinquennium was 104 and the average number who graduated 21. *Bombay Veterinary College.*

389. At the beginning of the quinquennium a new hostel with quarters for accommodating 156 students was opened in *Calcutta*. A *post-mortem* room, hospital surgeon's quarters, quarters for married and unmarried overseers have been provided, and the laboratory accommodation has been extended by the addition of a room for photo-micrography and a dark room. A private hospital for students and a football and cricket ground have also been added and the services of a trainer and gymnasium instructor have been provided. The work in the research laboratory has included the examination of and report on pathological specimens and blood slides, the preparation of a quantity of normal sterile horse serum, the bacteriological examination of samples of bone-meal and some work on the treatment of surra. A post-graduate course has been instituted at the college. The average number of students who attended the college during the quinquennium was 152 and the average number who graduated was 30. *Bengal Veterinary College.*

390. The superintendent of the civil veterinary department, *Madras*, has been relieved of the charge of the college and a whole-time principal has been appointed to it. The result has been a steady improvement in the work of the college, facilitated by the smallness of the classes which enables the lecturers to devote more time and attention to them. Land adjoining the college has been acquired for a recreation ground and for building purposes. A bacteriological laboratory and pharmacy have been sanctioned, but the buildings have not yet been commenced. Valuable models and instruments have been added to the museum. There has been a large increase in the work of the hospital attached to the college. The college staff has undertaken the examination of the slides sent in by the superintendent, civil veterinary department, and his assistants, and the work has attained considerable proportion. The average number of students attending the college during the quinquennium was 67 and the average number who graduated 15. *Madras Veterinary College.*

391. The *Burma* school has been transferred to Insein. A temporary laboratory has been put in working order and a large number of smears examined, chiefly of diseases suspected of being of a contagious nature. In view of possibility of the future expansion of the school, about nine acres of land have been acquired. A laboratory assistant has been added to the staff. The number of cases brought for treatment at the hospital continues to increase steadily. A school for the training of Shans to deal with *Burma Veterinary School.*

contagious diseases in the Shan States was opened in 1910 and is reported to be doing good work.

392. Particulars regarding the number of students and the expenditure in the different colleges during the quinquennium are given in appendix XXIII

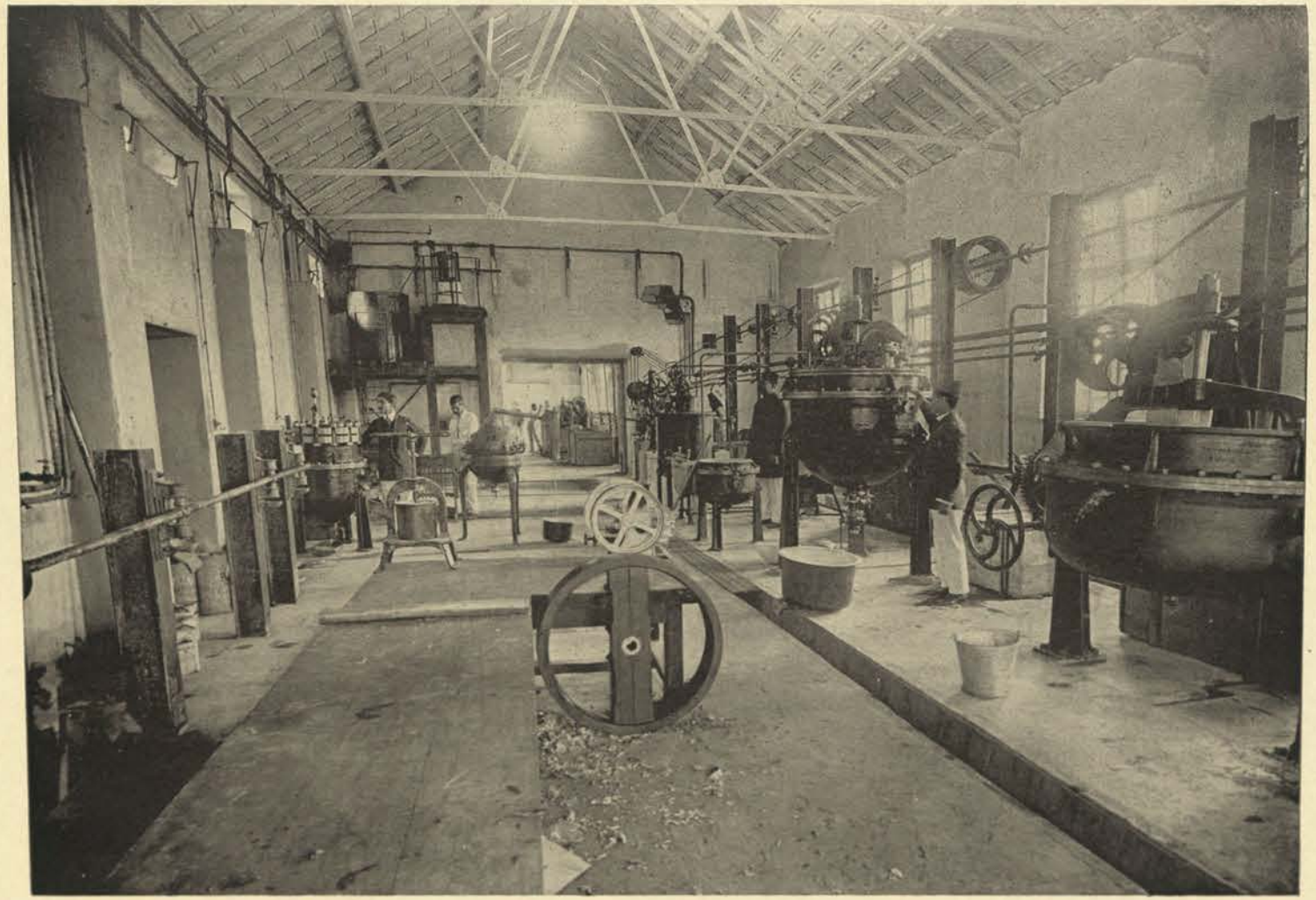

Photo.-Mechl. Dept., Thomason College, Roorkee.

INDIAN INSTITUTE OF SCIENCE, BANGALORE.
DEPARTMENT OF APPLIED CHEMISTRY.

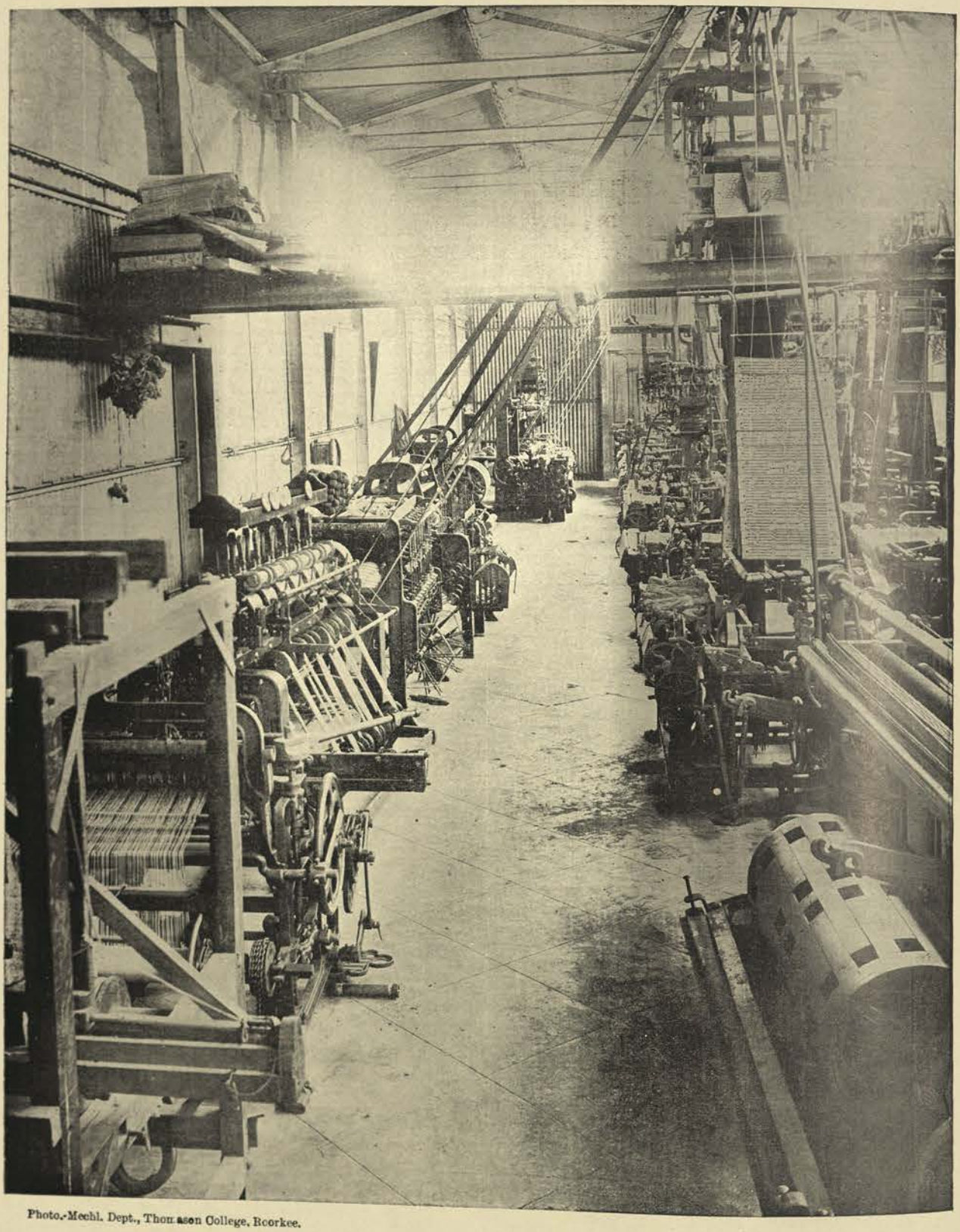

Photo.-Mechl. Dept., Thomason College, Roorkee.

VICTORIA JUBILEE TECHNICAL INSTITUTE, WEAVING SHED, BOMBAY.

CHAPTER X.

TECHNICAL AND INDUSTRIAL EDUCATION.

I.—General.

Definition

393. While the institutions described in chapter IX are primarily intended to prepare students for employment under government or other public bodies (though they have also come to include industrial or semi-industrial departments), the institutions described in the present chapter are distinctly industrial—that is to say, they teach the scientific principles of industrial processes, the processes themselves or the manipulation of material involved in trades or crafts.

Policy of Lord Curzon's government

394. Twelve years ago it was observed that industrial schools in India were lacking in definiteness both of method and object, that there had been no clear differentiation between general and technical studies, that they were not organised upon any sustained policy, that they were insufficiently co-ordinated with local industries and trades and that the impression they had produced upon industrial education and development had been relatively small. Lord Curzon's government took active steps to remedy this state of affairs. In the first place, they constituted a committee immediately after the Simla conference of 1901, which held conferences with local authorities in the provinces. The main recommendation of that committee was the organisation of an apprentice system under which the master artisans would ply their trades on the school premises. This was not accepted by the Government of India, who, in a resolution dated the 4th of January 1904, proposed whole-time schools at industrial centres for those who had reached a certain standard of general education, and for the encouragement of local handicrafts half-time industrial primary schools the course in which should be designed with special reference to teaching accuracy of workmanship and familiarising the pupils with the best designs and processes applicable to their hereditary calling. Importance was also attached to the formation of an inspecting agency and the provision of scholarships. The needs of the time were noticed in the resolution of 1904 on Indian educational policy, and the matter was referred to Local Governments. In the meantime, the Government of India made a recurring assignment for technical education of Rs. 2,44,000.

Provincial conferences and schemes.

395. The reference to Local Governments produced various schemes, a feature of which was the necessity of establishing schools of higher grade in addition to the fostering of trade-schools. The whole subject has recently engaged much attention on the part of the educated public and of government. There has been a series of industrial surveys conducted during the quinquennium—in Madras, in Bengal, in the United Provinces, in the Punjab, in Eastern Bengal and Assam and in the Central Provinces. There has also been a series of industrial conferences. In *Madras*, the Ootacamund conference of 1908 recommended the creation of a department of industries and the transfer to it of the supervision of technical and industrial education. This proposal has been sanctioned in part; but the pioneering of industries by government was not allowed; it was held that state funds might be expended upon familiarising the people with such improvements in the methods of production as modern science and the practice of European countries can suggest and that it should be left to private enterprise to demonstrate that these improvements can be adopted with commercial advantage. A committee has recently sat in *Bombay* to consider the question of co ordination between the courses and standards of technical institutions. At the close of the quinquennium a committee in *Bengal* was considering the question (among others) of a technological institute for Calcutta. A conference for the *United Provinces* was held in 1907 at Naini Tal. It recommended the establishment of a technological institute, a school of design, two industrial

schools on the lines of that at Lucknow, an experimental weaving station and a carpentry school, the introduction of a practical character into general education and the appointment of a director of industrial inquiries, etc. Much of this programme has already been carried out, as will presently be seen. A committee constituted in the *Punjab* in 1911 considered that there was nothing radically defective in the course of study at the technical schools, but that the industrial teaching was often unintelligent owing to the employment of ill-paid artisans. It was suggested that the Mayo School of Art should specialise in the training of efficient craft teachers and that as an experimental measure schools should be started teaching particular industries by instructors trained in European methods without any attempt at general education. In 1909, a conference was held in *Eastern Bengal and Assam;* this also recommended the formation of a special department and the establishment of a central industrial institute at Dacca, with demonstration factories. A conference was held in *Burma* in 1909 among the members of which there was considerable divergence of opinion. The recommendations included the establishment of a technical school in connection with the Insein engineering school with smaller schools at various centres, the encouragement of missions and other agencies to start craft classes and the encouragement of technical and hand and eye training in vernacular schools.

Progress during the quinquennium.

396. The general policy was thus laid down in 1904. It has since been expanded by the demand for institutions of a higher type than the trade-school, and elaborated for each province into schemes in general conformity with the main lines. The progress of the last five years has been considerable and may be described under the heads of supervision, organisation and numbers. Finally, it will remain to point out defects and difficulties and describe the most recent steps adopted for their remedy.

(a) Supervision.

397. The question whether industrial education should be under the departments of public instruction, or transferred to departments of industry as they arise, or transferred only as concerns schools organised on a more or less commercial basis, is one which has not yet been fully decided. Different arrangements exist in different provinces. In *Madras* a department of industries was created in 1909-10, of which the director undertook the inspection of industrial schools. The creation of this department was vetoed by the Secretary of State, and inspection was retained in the hands of a superintendent of industrial education under the department of public instruction. (Since the quinquennium ended, the department of industries has been sanctioned, and part of its duties will be the supervision of industrial schools—by which are meant those in which attention is to be paid to commercial considerations during the period of training—while for technical schools the education department under the director of public instruction will continue to be responsible.) A professor of the College of Engineering at Poona is also inspector of technical and industrial schools in *Bombay;* and there is a special inspector of weaving schools; both are under the local department of education. A superintendent of industries in *Bengal* was appointed in 1910; he also is under the control of the director of public instruction and inspects industrial schools. Mr. de la Fosse says of the *United Provinces:*—

> "When recommending the appointment of a special officer for directing technical education, the Industrial Conference had proposed that he should be styled director of industrial inquiries and industrial education; that he should be independent of the educational department; and that he should have the same status and emoluments as the director of public instruction. The Secretary of State did not agree with the view that technical and industrial education should be thus divorced from general education, and in sanctioning the creation of the post he ordered that the designation of the new officer should be changed to that of inspector of technical and industrial institutions; that his proposed salary should be reduced; and that in regard to educational matters he should be subordinate to the director of public instruction. The actual designation of the post which the Local Government has adopted is that of director of industrial inquiries and inspector of industrial schools."

An officer was appointed in 1910. In his former capacity he deals with government direct; in the latter he is under the education department. There is a director of industries in the *Punjab* (who is also the director of

agriculture); but the inspection of industrial schools is entrusted to the staff of the school of art. In the *Central Provinces* also the director of agriculture undertakes the industrial branch, and here he supervises industrial schools. In *Burma* the ordinary inspecting staff appears to be the only agency.

398. The difficulty of classification of institutions of this nature is merely a manifestation of practical difficulties that underlie the problem. To the two types of schools foreshadowed by the Government of India in 1904 there has come to be added the idea (if not the fulfilment) of high technological institutions. Thus we arrive at the three-fold classification—which distinguishes between (*i*) technological institutions intended to instruct in the principles of science as applied to industrial arts and to produce masters and managers of industries and scientific advisers; (*ii*) technical or intermediate schools for the training of foremen and others who require some knowledge of scientific principles and of machinery; (*iii*) trade or craft schools intended to train artisans to follow their calling with dexterity and intelligence. *(b) Organisation.*

399. The progress of the last five years is sufficiently indicated by the following figures for technical and industrial (exclusive of art and commercial) schools. The number of schools has risen from 147 to 242, the largest increases being in Madras, Bengal, the United Provinces and the Punjab. Pupils have increased from 6,820 to 12,064, and it is noteworthy that the present number is nearly four times that in 1897. Expenditure has risen from Rs. 5,91,095 to Rs. 11,72,947 a year; and the amount spent from public funds from Rs. 2,12,504 to Rs. 5,25,506. *(c) Figures.*

As regards management, 173 schools are under private bodies. Of these, 141 are in receipt of aid. Mission bodies are prominent as managers of these institutions.

400. While progress is re-assuring, various difficulties have asserted themselves, some of them long recognised, some the product of new developments. Technological institutions are only now beginning to be established in India. Hitherto, students have been sent abroad with scholarships. It is not always easy to arrange suitable courses; practical training presents a difficulty; some manufacturers are naturally chary of admitting outsiders to an examination of processes. The employment of the scholars on return, while by no means discouraging, is not fully assured. In technical schools of the higher sort it is not always easy to secure pupils. In trade-schools, there is the danger that boys will be attracted who are not of the artisan class and have no intention of pursuing the craft taught; pupils frequently leave the school before they have completed the course or become efficient; and there is the difficulty (most observable in the case of weavers) of providing them with proper implements when they take up their own work. The Bengal administration report says, " Money and labour have been wasted in teaching boys trades which they will never practise. Pupils often leave the schools when they have learned merely enough of the trade to earn a living. Industrial schools have apparently worked no change for the better in the Indian carpenter; the Chinaman has still to be called in when any work out of the common is required." *Difficulties in industrial education.*

401. These points have recently been considered. At the Allahabad conference of 1911 it was recommended that technical schools should specialise along lines converging on local industries, and industrial schools should be permanently directed towards such industries as exist in the locality (see paragraph 30 of the resolution). In 1911-12, Lieutenant-Colonel E. H. de V. Atkinson, R.E., principal of the Thomason College, and Mr. T. S. Dawson, principal of the Victoria Jubilee Technical Institute, were deputed to make an enquiry as to the means for bringing technical institutions into closer touch and more practical relations with the employers of labour in India. Their interviews with employers form a most interesting record. They came to the conclusion that there is practically no opening for high grade mechanical or electrical engineers whose education is mostly of a theoretical character, but that there is a very large opening for the employment in these branches of men who, after training in a properly equipped institute, are willing to gain their practical experience by apprenticeship on a living wage, work with their hands and observe factory hours and rules. They recommended a *Latest developments.*

similar scheme of training for textile industries, and a school of mines in the Bengal coal-fields with subordinate classes for evening lectures. At the very end of the quinquennium the Secretary of State for India appointed a committee in England to enquire and report as to the facilities available for Indian students for industrial and technological training in that country, with special reference to the system of state technical scholarships tenable abroad. The enquiries and findings of this committee belong to a period subsequent to that covered by this review.

Imperial grants.

402. For the general improvement of technical education or for the improvement of special institutions, the Government of India have, in the past two years, allotted Rs. 17,84,300 non-recurring, and Rs. 2,00,000 recurring.

Classification.

403. In the description which follows, the three-fold classification of these schools is adopted. But it is to be remembered that the technical school and even the engineering school or college generally contains its artisan classes or similar means for simple trade instruction. In particular, it has already been shown that at Sibpur and Roorkee the technical and industrial aspect of education has been recently developed side by side with the professional. An account of schools of art and of commerce is also given.

II.—Technological institutions.

State technical scholarships.

404. At the beginning of the quinquennium there were no institutions of this class in India, though instruction of an advanced type was given in mechanical and electrical engineering at the professional colleges. In place of such institutions, scholarships tenable abroad were offered to Indian students in order that they might benefit by the facilities available in England and elsewhere. During the quinquennium an institute has opened at Bangalore and another has been attempted and proposed in the United Provinces. The present section describes these developments.

405. The system of state technical scholarships commenced in 1904. Their object is to qualify the holders on returning to India to assist in promoting the improvement of existing native industries and the development of new industries, especially those which are or may be organised on a considerable scale and those in which Indian capital is or may be embarked. The subjects are annually chosen by Local Governments in consultation with mercantile opinion. Agriculture, law, medicine, forestry and veterinary science are excluded from the scheme. Engineering, at first excluded, has now been admitted; and recently a scholar was sent to study architecture. There is no examination. Nominations are made by the Local Governments and the final selections by the Government of India. Those are chosen who are considered to fulfil certain conditions. The scholar is expected to have had the best education available in the province in the industry he intends to study, a practical interest in the subject and the intention of devoting himself in India to the practice of what he has learned. The value of each scholarship is £150 a year. The scholar also receives his travelling expenses and his education fees. The tenure of the scholarship is two years, but the period may be extended. Government does not guarantee the holder any employment on his return. Ordinarily one scholarship is awarded to each province annually, but more may be given, subject to a total limit of ten scholarships. Up to the end of March 1912, sixty-six scholars have been sent (an average of about nine a year). In order of popularity the subjects chosen are textiles, mining and mining engineering, mechanical and electrical engineering, leather, metallurgy, soap-making and the chemistry of oils and fats, sugar industry, alkali, pottery, and engineering and sanitary science. Thirty-one scholars have already returned to India ; two have obtained employment abroad; the rest have not yet completed their studies. Of the thirty-one who have returned, eighteen have obtained private industrial employment, seven are in government posts connected with industries, one is similarly employed in Mysore, one has joined the bar, one is dead, and there is no certain information about the remaining three.

Other scholarships

406. A society in Calcutta, called the Association for the Advancement of Scientific and Industrial Education of Indians, has also raised funds, aided

by government, for sending scholars abroad. It appears that 80 students thus sent have returned, of whom twenty-eight have found industrial employment, nine have started work on their own account, nineteen have entered government, municipal or state service or are engaged in teaching, and twenty-four (most of whom had only recently returned) have not yet found employment. *tenable abroad.*

407. The Indian Institute of Science at Bangalore was initiated by Mr. J. N. Tata, a Parsi merchant; but the scheme did not take final shape till after his death. The Tata family have given land in Bombay which brings in Rs. 1,25,000 a year. The Government of India gives Rs. 87,000 a year. The Mysore Government contributed a site and five lakhs towards the initial expense, and the Government of India gave two and a half lakhs towards the same. The institute opened in July 1911, and 17 students entered it that year. It provides for research, the application of new processes and the production of thoroughly trained managers. It possesses departments of general, organic and applied chemistry and electrical technology and also provides instruction in French and German to enable students to read technical journals. As the first batch of students entered within a year of the end of the quinquennium it is too early to judge of its results. The Allahabad conference recommended its development into a complete faculty of pure and applied science. *The Indian Institute of Science.*

408. The establishment of a technological institute for the United Provinces was one of the proposals of the Naini Tal conference. It was decided that it should consist of two parts. Classes in mechanical and electrical engineering were to be attached to the Thomason College. The department was opened in 1909 and took the place of a previously existing technical class. It was intended to attract a higher class of students, particularly those who had business connections and were destined to be managers or employers of labour. No candidates joined. A three-fold division was then made, the highest department offering engineering and training in textiles, the second and third being on a lower plane and intended for mechanics. The engineering section has hitherto not drawn the right class of students. A whole-time textile instructor was engaged and plant was provided. It was found difficult to obtain any students with the necessary qualifications. The instructor resigned. It is intended to render the class more attractive by adding weaving, bleaching and dyeing. The first experiences, says Mr. de la Fosse, have not been very encouraging, owing to the reluctance or inability of the class which it was proposed to benefit to take advantage of the opportunities offered. The lower division or mechanical apprentice class (which belongs rather to the category of technical schools) has been more successful. The second branch was to be established at Cawnpore with the object of encouraging research in applied chemistry with reference to important industries in the province. The Secretary of State did not sanction the scheme. A more modest scheme was accordingly formulated, intended to give instruction in the chemical aspect of sugar, leather, acid and alkali manufacture, dyeing, bleaching, printing, colouring and finishing of manufactured goods and paper making. Hitherto a site has been secured and buildings commenced. *Technological schemes in the United Provinces.*

409. The mechanical and electrical engineering sections of the various professional colleges may be classed as technological. At Sibpur the class for tinctorial chemistry (mentioned in paragraph 353) may also be so described, and possibly the mining section there opened. *Other technological classes.*

III.—Technical schools.

410. Technical schools are those which train a grade midway between the manager or master on the one hand and the artisan or craftsman on the other. The engineering colleges in their lower departments are calculated to produce men of this type in the mechanical and electrical branch. The special institutions either converge on distinctive local industries, or where these do not exist, are situated at centres where an education in various branches may be expected to bring employment. *Technical schools in different provinces.*

411. With the removal of the chrome tanning department described in the last review, it may be said that, with the exception of the schools mentioned in paragraph 350, the institutions in *Madras* are mainly of the craft-school order. The presidency possesses cotton-mills, tanneries and railway workshops. But, says Sir A. Bourne, "industrial education appears so far to have had little relation to production on a large scale as exemplified by such factories and workshops." The government technical examinations will be noticed in connection with industrial schools.

412. Among a number of schools in *Bombay* four are classed as technical schools. Two require special mention. The Victoria Jubilee Technical Institute, Bombay, has classes in mechanical and electrical engineering, textile manufacture and technical chemistry. It is a privately managed institution under a board and is considerably subsidised by government. Hostels for 200 students, a central electric power station and other works have recently been carried out, towards which government contributed a lakh of rupees, as well as a special recurring grant of Rs. 15,000 a year for increased staff. The courses have been recast, the main change being their extension from three to four years including six months' practice in an outside mill, factory or workshop under supervision. The textile department is reported to be making particularly good progress, and the students acquit themselves well at the City and Guilds of London Institute examinations. The Ranchhodlal Chotalal Technical Institute at Ahmedabad was under contemplation when the last review was written. It opened, as an aided institution, about two years ago; and the first batch of students has not yet been turned out.

413. In *Bengal* schools of this type are devoted largely to mining and weaving. Managers of mines are required by rules framed under the Indian Mines Act (VIII of 1901) to possess first or second grade certificates according to the output of the mine or the number of employees. In addition to examination, five and three years' practical experience in a mine is necessary for the attainment, respectively, of a second and of a first grade certificate. But these periods may be reduced by two years through attendance at a course in a recognised institution. In order to provide such institutions and facilities for a general training in mining subjects, the Government of Bengal (the province where the majority of the mines are situated) established in 1906 a course at the Sibpur college and mining classes in the coal districts.

At Sibpur the student has first to pass the sub-overseer examination. He then pursues a two years' course in geology applied to mining, mining engineering, coal and metal mining, and descriptive mineralogy. Six weeks' annual training is given in camp in the coal-fields. There were sixteen students in 1911-12. Seven of them were special students, *i.e.*, men already employed in mining who are attracted to the college by liberal scholarships. Owing to the lack of education among these special students, it has been decided to abolish the scholarships.

The mining classes are held at four centres in the Jerriah and Raniganj fields. A local committee at each centre arranges for good attendance. The average attendances in 1911-12 were 29, 35, 30 and 40 at the four centres respectively. The lecturers are recruited from local mining managers. It is proposed to increase the number of centres to six. The classes are controlled by a Mining Educational Advisory Board which includes inspectors of mines, managers and educationists.

The utility of the lectures is lessened by the want of knowledge of English among the audience.

The course at Sibpur is not regarded as a success. On the other hand, the classes in the coal-fields have given satisfaction. The authorities concerned with mines and the representatives of the mining interests are in favour of instruction on the spot, and it is generally thought that the system should be developed by the opening of a school of mines at Asansol in addition to night classes at various centres. (The Indian Mining Association would prefer to develop the existing night classes.) It will be remembered that a university graduate course in mining has been framed. The Bengal report says, "The general conclusion appears to be that provision should be made both for a central institution at Asansol and for a more efficient and more extended system of instruction, through evening classes in selected localities, than is given at present. It is moreover evident that the introduction of university instruction in mining engineering would be at least premature for the present, if not entirely inadvisable."

In 1909 the Serampore Weaving Institute was opened in Bengal. It has two classes. One is for youths who have been trained in a technical school or have passed the 'B' class or matriculation. They have a two-year course in power and hand-loom weaving, drawing and designing, calculated to fit them for positions in manufacturing concerns. Of a total of 64 students, 35 are in this class. They are encouraged to take the City and Guilds of London Institute examination in cotton weaving and spinning. They have had considerable success in the examination and have no difficulty in finding suitable employment. The other is really a craft-class, where weavers of the neighbourhood are put through a six months' course in practical weaving and improved methods of preparing yarns for warps on the Indian system. The principal says of this class, "At the commencement of the institute much difficulty was experienced in getting the actual weavers to join, as, apart from their prejudices, they were under the impression

that they could learn nothing more than what they already knew. I am pleased to be able to state that in a little while they changed their minds, and were full of wonder when they saw how easily their cherished trade secrets could be analysed and worked out after a little instruction, even by youngsters. This difficulty has been overcome, and at present there is no trouble in getting *bonâ fide* weavers to fill the place of those who pass out. Another attraction is the simple course of dyeing that they are taught. Up to the present time they had to buy dyed yarns at high prices, and the weavers tell me that the knowledge of dyeing they get is quite sufficient for them to earn a livelihood apart from weaving. Prior to the establishment of the Weaving Institute, Serampore, weavers limited themselves to the manufacture of *dhootis* with coloured borders, and with few exceptions flowered borders were considered family secrets handed down from father to son, and these border designs were limited ; now they are able to produce any design working up to about 10 or 12 shafts from design papers. The drawing lessons they get are a great assistance in producing new and original designs." Twenty small scholarships are given, and account for nearly Rs. 7,000 out of the total annual cost of Rs. 27,000. A difficulty is the supply of looms to those who leave the school. There are also three outlying stations where instruction is given and a school at Sambalpur mainly for the Gonds.

A society in Calcutta started in 1907 an institution called the Bengal Technical Institute which was amalgamated in 1910 with the technical department of the Bengal National College. It has an engineering side, with a course similar to that taught at Sibpur, and a technological side which teaches ceramics, tanning, painting and varnishing, dyeing, bleaching, soap, candle, oil and perfume making, and the preparation of matches.

414. The technological department of the Thomason College in the *United Provinces* has already been mentioned; other institutions will be described under industrial schools.

415. In the *Punjab* a school called the Victoria Diamond Jubilee Hindu Technical Institute has been started at Lahore with the object of attracting Hindus, especially those of the higher castes, to take up industrial employment. It is managed by a board of governors and derives its income from grants, subscriptions, a small endowment and the sale of the outturn. "There are two departments," writes Mr. Godley, "senior and junior; the former trains students for mechanical engineering, and the latter for engine-driving. Special instruction is also given in carpentry, fitting, etc. At the close of the year there were 50 students, of whom 28 were in the senior and 21 in the junior class. A number of students obtained certificates under the Boiler Act, and the report contains a list of ex-students who are employed as engineers and drivers on salaries from Rs. 30 upwards. The total expenditure was Rs. 12,599, about one-third of which was met from grants. A foundry was added during the quinquennium. The efficiency of the institution is greatly hampered by want of funds, and the practical value of the training given under the present conditions has been questioned by experts."

Mr. Godley also makes the following observations:—

"The province is well equipped with professional institutions maintained by the State, while the industrial schools maintained by local bodies offer possibilities of development into craft schools under the guidance of the Mayo School of Industrial Art. Technical education in the restricted sense, *i.e.*, the training of a mechanical engineer and specialised scientific training for particular trades, can hardly be said to exist as yet. Of all forms of education this is not only the most costly, but also the most uncertain in its results. It is perhaps not sufficiently realised that technical institutions of the kind referred to can only flourish in an industrial environment, where there are concomitant industries which can supply students with opportunities of practical experience and well-paid employment. To argue otherwise would seem to imply that a school of technology has as good a chance of success at Dublin or Galway as at Manchester. There is nothing in the industrial history of western countries to confirm the view which is not infrequently advanced that technical schools will *proprio motu* create industries. The average student attending a school of technology aims at getting employment on good pay as the result of his training; and if the capitalist employer is non-existent, or if, as commonly happens, he is disinclined to venture his money on school-taught theory which does not necessarily carry with it business capacity, the technical graduate is worse off than the product of an arts college. It may well be doubted, therefore, whether in the Punjab, where industrial concerns are comparatively small and few, and salaries are on a modest scale, the time has come for advocating an ambitious scheme of technical education. More hope seems to lie in the direction of improving crafts and small industries by the introduction of better methods and labour-saving appliances, through the agency of craft schools or otherwise."

416. Mention has been made of the school at Insein in *Burma* in the chapter on professional education.

417. Of the *Central Provinces*, Mr. Wright says, "During the quinquennium the Industrial School at Amraoti was converted into the Berar Victoria Memorial Technical Institute. The buildings and shops were erected by popular subscription. A government grant-in-aid is given for maintenance. On completion of a three years' course

in the institute followed by a year's work in a mill or factory students are eligible for the Boiler Act examination. There is also a class for the sons of artisans in carpentry and metal work." Eleven scholarships were given during the five years for study of textile industry, tenable at the Victoria Jubilee Technical Institute, Bombay.

IV.—Industrial schools.

Industrial schools in different provinces.

418. It is impossible to give an exhaustive account of all industrial schools. The following paragraphs attempt to give an idea of the general line adopted in each province. The schools may conveniently be divided into general schools (*i.e.*, those that give instruction in a variety of subjects, generally wood and metal work, weaving, etc.), and weaving schools, those, that is, that devote themselves mainly to the hand-loom industry. In some provinces, such as Madras, there are also special arrangements made for study of telegraphy, and in others there are automobile classes.

a) General schools.

419. Sir A. Bourne remarks that in *Madras* industries are carried on by people working with their families in their homes or in small groups in workshops; the industrial revolution has gone but a little way. There is considerable scope for craft classes in this presidency as is testified by their numbers and rapid increase. "The industrial schools have mostly been established by missionaries anxious to secure a livelihood for their orphans. They are therefore often on a small scale and many of them are schools of lace-making and needlework. The director of industries criticised them as forming an unorganised body and as being too little in touch with actual industries and pointed out that industrial efficiency demands besides craftsmanship the ability to use time and material with such economy as results in commercial profit and that the training necessary for this can only be obtained in an institution in which one part of the work is the actual production of goods at a profit." Among the crafts taught the most general is woodwork. The largest classes for this trade are those of the Madras Anjumani-Muffidi-Ala-i-Islam, an institution for poor Muhammadans substantially aided by government. The other schools appear to be managed by mission bodies. Blacksmith's work is taught in about six schools of which the Madura Technical Institute (already mentioned) has the largest class. The number studying metal work has somewhat declined and fitter's work seems to have taken its place. A feature of the most efficient industrial schools is the extent of their commercial side. Skilled artisans are employed and orders of some magnitude are executed. Though the total value of work turned out fell during the quinquennium, the amount realised from sale-proceeds of school manufactures rose. "This," says the director, "seems to show that the schools are becoming increasingly efficient from a commercial point of view and are more successfully studying their markets." Printing and book-binding are taught on a considerable scale in the Madras Government Press Technical School where general press work is also learnt. There are other schools which teach compositor's work. The numbers are said to have fallen. The government technical examinations have already been mentioned. They are of elementary, intermediate and advanced grades. The subjects are numerous and include as well as engineering, sanitary science, pharmacy, commerce, music, drawing, jeweller's work, printing, etc., wood, metal and leather work, textiles, glass, pottery, tailoring and cooking. Scholarships are given on the result of the examinations.

420. Including manual training classes, *Bombay* reports 63 schools of this class, some of which are managed by mission bodies. Those situated in the northern division are reported to have done particularly well. One of them, the Mahajan Home Industrial School at Surat, is a charitable institution attended by orphans belonging to the Kaliparaj community where girls are taught embroidery and boys carpet making. With such exceptions, however, the inspector of technical and industrial education considers the state of these institutions to be unsatisfactory. In an interesting monograph he attributes this to the following causes:—

"(1) Lack of co-ordination of technical and industrial education throughout the presidency. Managing bodies and superintendents of schools are left to themselves as regards organisation and management, except in so far as they follow whatever advice they may have received from the inspector of technical education during his annual visit. In some cases creditable efforts are made to meet the needs of the locality in respect of this kind of education. In other cases managing bodies or superintendents, though perhaps energetic enough, have failed to produce results in accordance with the object of such schools, *viz.*, to give boys a training that will be of practical value in preparing them for industrial life. In many instances, however, teachers have no further aim than obtaining good inspection reports.

(2) The teaching is usually conducted in a dogmatic manner, without method and without interest. In other words, the teachers have no clear idea of their functions as teachers and are in consequence uninspiring.

(3) The majority of boys who enter an industrial school do so without any definite object in view, and in this state of mind they drift aimlessly through their school course.

Their goal during this time is in most cases no higher than that of passing an examination. They and probably also their parents and guardians make no effort to form a plan of life, to choose a trade and keep that end in view.

(4) There are a number of schools which do excellent work, but which cannot be said to have obtained real success, for this reason, *viz.*, that the majority of these pupils on leaving school either would not or could not follow up the trade or occupation for which they had some kind of preparation at school. I have tried to obtain statistics to show the extent to which this state of matters exists. Only a very few schools were able to comply with my request for returns, but these show that a very small proportion of the total pupils who have passed through the schools obtain suitable employment subsequently.

(5) The attitude of local authorities towards industrial education has in the past been often one of apathy. In many cases, local authorities are interested enough, but are apt to rely on their own knowledge of the subject or on that of incompetent advisers. In local board schools, teaching appointments are filled up without consulting the opinion of the director of public instruction or the inspector of technical education.

(6) The personal relations between the superintendent and his managing board, and the various authorities and employers of labour in the locality, have a very strong bearing on the question of employment of industrial school pupils subsequent to their leaving school."

To remedy these defects he recommends the appointment of a full-time officer, the training of all teachers of technical and industrial subjects, selection in the admission of pupils, the enlistment of the sympathies of employers of labour and others in the interests of such education, the approval of the director on the advice of the officer in charge of this branch of instruction to all appointments and the raising of the pay of teachers and superintendents.

421. *Bengal* has certain technical schools mainly for engineering, as already mentioned, and others of a more industrial character. The best of these is considered to be the Baniadih school attached to the East Indian Railway colliery workshop maintained by the company for the sons of its employees with a grant from the district board. It teaches physics, chemistry and mechanics and also gives a training in carpentry and blacksmith's work. Moulding and lock making are taught at the Barnagore industrial home; carpentry and carpet weaving at the Kaurapukur industrial school managed by the London Missionary Society; carpentry, cane-work and weaving in the Wesleyan Mission school at Bankura; carpentry, weaving, tailoring, shoe-making, cane-work and book-binding at three schools in Balasore, two of which are managed by the American Free Baptist Mission. Of the schools in Calcutta itself the most important is that managed by the Oxford Mission at Ballygunge.* Mr. Cumming makes a general remark about some of the institutions: "As the schools are subsidised by the district board there is every temptation for pupils to join who only desire the general education, and I found at one school well dressed sons of *baniyas* who had no industrial ambitions at all." An interesting development is the adoption of the apprentice system for Europeans and Indians by the railway companies in the railway workshops at Jamalpur, Lillooah and Kharagpur, and at the workshops of Messrs. Burn & Co.

422. In the *United Provinces* the industrial conference recommended the improvement of the Lucknow industrial school and the establishment of similar schools at Cawnpore and Gorakhpur and subsequently elsewhere. The Lucknow school after passing through many stages has been thoroughly reorganised. The numbers have been reduced and it now contains only genuine industrial students. The staff has been strengthened and the equipment increased. A hostel has been added and stipends provided for relatives of artisans. A night class containing 96 students is attached to the school. A class for painting and polishing has recently been started and is attended solely by the relatives of painters. Of the two new schools proposed only that of Gorakhpur has been started. It opened in 1910 on lines similar to those of the Lucknow school. It has made a successful start, the ordinary classes have been well attended and the night school has 71 students. Another recommendation of the conference was the establishment of a school originally designated the school of design. This is called the School of Arts and Crafts and was opened at Lucknow in 1911. A good start has been made, a hostel has been provided. The subjects taught are ornamental work, wood carving and gilding, stone carving and sculpture, calico printing, stencilling, lithography, iron work, drawing, painting, designing and modelling. The institution is intended to "provide instruction in those branches of design and handicraft which bear on the more artistic trades and professions now practised, or which may be developed in the province." In addition to these larger schools there are eleven aided and seven unaided industrial institutions founded with the object of helping poor boys to earn a livelihood by joinery, smith work, printing, tailoring, shoe-making, gardening, etc. The director of industries considers they are attaining the greatest success when they are organised on the apprentice system under which a journeyman artisan works with not more than two or three boys to help him. He also says that there is not much demand among

* It is understood that this has now closed.

the artisan classes for tuition, but a growing demand among those not of the artisan classes for industrial tuition for their friends and relatives.

423. The most prosperous institution in the *Punjab* is the railway technical school at Lahore with 461 pupils. There are also eight industrial schools maintained by local bodies which follow a departmental curriculum which was revised in 1911. Literary subjects are taught in addition to carpentry, metal work and weaving. It is reported that 66 per cent. of the pupils belong to the artisan classes and that a record of after-careers shows that most of those who have received this education take to industrial work. Special grants have been offered to local bodies for the opening of craft schools or for adding industrial instruction to ordinary schools and the establishment of an industrial school in each district has been suggested. Industries are also taught in orphanages and elementary schools.

424. Only three industrial schools are reported in *Burma;* but incidentally the American Baptist Mission has introduced instruction in carpentry, boat building, brick work and gardening at several of its schools. And at the school for Karens at Toungoo, carpentry, printing and book-binding are taught.

425. In addition to the artisan classes attached to the Ahsanulla School of Engineering and to the technical schools, *Eastern Bengal and Assam* has eight small industrial schools at Mymensingh, Bogra, Shahazadpur (Pabna district), Chittagong, Rampur-Boalia (Rajshahi), Malda, Shillong and Kohima. The subjects generally taught are black-smith's work, carpentry and weaving. The school at Bogra was started in 1908 and is a government institution. Those at Shahazadpur and Chittagong are private institutions. The latter received aid and there were proposals for its provincialisation. This, however, was not carried out; and the school has practically ceased to exist. The school at Rampur-Boalia is for sericulture and is under the agricultural department; that at Malda is a weaving school under the district board. The schools at Shillong and Kohima, called after Sir Bamfylde Fuller, who initiated the scheme, are for the training of Khasis and Nagas; stipends are given; and the latter school is said to be particularly successful. There is also a Williamson Endowment in Assam (called after a tea-planter who left a sum of money for the education of the Assamese), from the proceeds of which, subsidised by government, twenty-one boys are maintained on stipends at railway workshops and in private concerns and are provided with tools on the completion of the course.

426. In the *Central Provinces* some of the mission bodies carry on industrial education mainly for the benefit of their famine orphans.

V.—Weaving.

(b) Weaving schools.

427. In *Madras* the number of pupils learning various crafts grouped under textiles is considerable although those who are learning cotton weaving show a decline owing to closure of one of the schools.

428. In *Bombay* textile schools naturally take a prominent position. The Victoria Jubilee Technical Institute has now a hand-loom section in addition to power weaving. The inspector of weaving schools makes the following observations:—"Since I began the inspection of weaving classes, fair progress has been made in some of the schools in which weaving is taught. There are ten small industrial schools in which instruction is given in textile work. There is no common curriculum for the schools. Each one has its own course of work, this makes it rather difficult to observe the progress made from time to time. If a common course of work was arranged for all the schools it would be the means of creating a keen competition to obtain the best practical results, especially if prizes were offered for work done. Some of the schools are in localities in which there is very little weaving, whereas in some of the chief hand-loom weaving centres weaving is not taught in the local industrial schools. This arrangement is one cause of the training not being as effective as it would otherwise be. From an educational and commercial point of view, this method is not good for the expansion of the cotton trade of this country because the boys only obtain a training equal to that of the bazar weaver, even assuming that the best of the local weavers are engaged to give instruction. Such instruction to the rising generation of hand-loom weavers, whose depressed condition is mostly due to the low level of primitive methods, will not be the means of raising the standard of work to enable them to compete with the weavers of other countries. Such teaching is without interest and of no real advantage. There will never be any natural indigenous demand for them until there is a higher standard of instruction given. In one small school several members of the committee are against any improvement being introduced. Two years ago I sent a fly shuttle motion, and mostly owing to the opposition of these members the loom had to be sent back. The same loom was sent to another school and it gave every satisfaction. I have pointed this out to show that members of the committee, by their apathetic attitude, keep back improved mehods of working. At the same time the school had three instructors; not one of the three knew how to work the simple motion, yet the motion was introduced in other countries 150 years ago for giving an increased production of cloth in a given time.

Such instructors will never be the means of developing the mental powers of the boys on modern lines and creating a natural demand for indigenous industrial schools."

429. *Bengal*, as well as the school at Serampore and the weaving stations which have already been mentioned, has textile classes at Kalimpong and among others a weaving school under the Dublin University Mission in the Hazaribagh district, a board school in the Palamau district and the Bihar weaving institute which is the only industrial school in the Patna division. The Darbhanga District Board entertains a peripatetic weaving instructor and a carpenter who go about to the more important centres for Muhammadan weavers. The carpenter repairs looms when required. This, says Mr. Prothero, is a useful system which might be conveniently imitated elsewhere.

430. Mention has already been made of the weaving classes at the Thomason College in the *United Provinces*. An important part of the Local Government's scheme of industrial development was the revival of the hand-loom cotton weaving industry through the popularisation of improved looms and methods of working. The establishment of a weaving station formed an item of the general scheme. The school has been situated at Benares and started work in 1911. "The class for which it caters," says the report, "is very poor, backward in education and suspicious of novelty." It has proved difficult to frame a satisfactory curriculum. Of the 10 students in the school at the end of the period only one belonged to the weaver class. It is proposed to organise a hire-purchase system to help weavers to buy improved looms.

There are also eight schools, the first and most important of which is the Hewett Weaving School at Barabanki. These schools were at first placed under the agricultural department, but were transferred in 1911 to the control of the department of public instruction. They are managed by local committees and aided by grants-in-aid from government, which aggregated Rs. 31,500 in 1911-12. It is estimated that 870 learners have been trained to the use of new looms and 451 of them bought looms. Stipends are given to pupils. Though the Hewett School has been successful, doubts are entertained in the report as to the work of the schools in general. Sometimes the pupils attracted are not members of the weaving class. So far as can be ascertained the use of the improved loom leads to over-production and it is consequently difficult to market the cloth. Though accurate figures as to after-employment are not available, it is noticed as significant that it was recently found necessary to ask mill-owners if they would give employment to past pupils. It appears to be questioned whether the hand-loom industry is capable of indefinite expansion as a home industry, or whether the tendency is towards the development of small weaving factories. The inspector suggests that possibly co-operation rather than cottage industries will prove the salvation of the weaver.

431. The *Punjab* has no organised system of weaving instruction, but efforts have been made to introduce improved looms and better methods. A weaving station has been established at Lahore and recently the Salvation Army opened a school at Ludhiana. The latter has proved only partially successful partly owing to the inability or unwillingness of the weavers to purchase the improved loom after instruction. The department of industries recently sold some of the Salvation Army looms on a system of payment by instalments and these are said to be working satisfactorily. Two of the board industrial schools teach weaving and a third school is to be opened.

432. In *Burma* weaving is taught at a girls' school managed by the Society for the Propagation of the Gospel at Shwebo and in 14 vernacular schools.

433. Weaving is taught in some of the industrial schools of *Eastern Bengal* which have been already mentioned. The only institution entirely devoted to this subject is the board school at Malda. The weaving class at the Kashi Kishore School at Mymensingh collapsed at the beginning of the period, but has been resuscitated*; nineteen stipends ranging from Rs. 3 to Rs. 10 have been created; and there are now 27 pupils. The class opened in the Bogra school proved a failure and was abolished.

VI.—Schools of art.

Figures.

434. Some account must now be given of schools of art and commercial schools. The schools of art in India are largely industrial schools. The large schools under the management of government number four. The number of their pupils has not increased and now stands at 1,234. Their cost is Rs. 1,96,556, all of which save about Rs. 32,000 is met by government. On the fine arts side the most noticeable tendency in recent years has been the attempt to revive Indian ideals and designs. There are also a few private schools.

Industrial art pattern books.

435. In 1905 a scheme was initiated for compiling a set of industrial art pattern books for India. These are being worked out in various provinces. The Bengal report makes mention of an important work which the Calcutta School of Art is undertaking for that production, namely, volumes for Dacca silver ware and Bengal ivory carving.

* It is understood it has again collapsed.

Art schools in different provinces.

436. In *Madras*, says Sir A. Bourne, the functions of the school of art as such had been rather thrown into the shade by its industrial activities during the previous quinquennium. "The staff and working of the school have been reorganised. It is now intended that it shall be concerned only with industrial art, the only concession to the claims of fine art that is made being the holding of a class for painting. There is other drawing instruction in the school, but it is made to subserve the needs of such crafts as engraving, wood-carving, weaving, and lacquer and jeweller's work. The aim is to develop the art industries of the presidency on Indian lines, and to avoid that westernizing of ideals and methods which it is conceived results from putting Indians through a South Kensington drill in drawing and modelling. The old system of paid apprenticeship has been replaced by scholarships and as the smallness of the number of these originally sanctioned appeared to discourage attendance, it was increased. The superintendent considers the influence of the government technical examinations harmful rather than not and rather discourages his pupils from taking them. A good number do so, however, and a large proportion pass. He holds competitions among them in craftsmanship and with the help of his staff awards certificates of merit. Improvements have been made in the building and equipment of the school. The superintendent again occupies the house on the premises, the pupils all attend for a full day's work, the staff is properly organized in industrial departments, and I am glad to be able to say that I consider that the school is now working steadily with definite intelligible aims and in a way adapted to their realization. The numbers on the rolls are not appreciably smaller than under the old system, and the average daily attendance is decidedly better. Pupils who have left recently have almost all secured work for which their training fits them."

It is added that 134 pupils of this school are learning wood engraving and that jeweller's work is also taught.

437. The Sir Jamsetji Jeejeebhoy School of Art in *Bombay* continues to be highly successful. It may be said to consist of three sections. (*i*) First, there is the school itself, where drawing, painting and modelling are taught and teachers are trained. It has 357 students. The principal says, "Many fine specimens of ancient paintings of the Persian, Moghul and Indian schools have been purchased and are exhibited in the school museum and the distinctive qualities of the eastern convention have been continuously brought to the notice of students of these classes. Nothing short of compulsion, however, will induce students to work in this style, and to apply such drastic measures would have the effect of emptying the painting school and of driving the students to classes outside the school where western methods and conventions are less intelligently taught by Indians who have studied in Europe." Excursions are taken to places which afford objects of interest for drawing, plans and elevation. A new development, from which the principal anticipates far-reaching results, is the extension of the architectural school. "In the year 1906, this school consisted of two draughtsmen's classes in charge of a non-professional teacher, the course of study being entirely an elementary one. At the present time the school is in charge of the consulting architect to government who is assisted by three professional lecturers and instructors and the course has been enlarged to one of four years, in which all subjects germane to the study of architecture are taught. A commencement has also been made in founding a museum of architectural casts, models and materials which is an indispensable part of the equipment of such a school. The presence of a professional staff of lecturers could only be obtained by holding the classes in the morning from 7-40 to 9-40, and these hours also suit the majority of the students who are engaged in architects' and engineers' offices during the daytime. Both with regard to the number of students attending the architectural school and the quality of the work done, the results obtained from the improved tuition and the extension of the course have been encouraging. The number of students has risen from 37 in 1906 to 140 in 1911, and the effect of the improved tuition has been already apparent in the higher class of draughtsmanship exhibited in the plans submitted by architects in the city, to the municipality and Bombay City Improvement Trust. In the art that appeals in different ways to the greatest number of persons distinct progress has been made and the foundation laid of greater progress in the future." (*ii*) The Reay Art Workshops, the utility of which was doubtful and which formed the subject of an enquiry in 1910, contain 171 pupils (of whom 79 receive stipends) studying wood-carving, engraving, iron work, carpentry, copper, brass, iron and gold work, and other subjects. (*iii*) The Sir George Clarke technical laboratories and studios were opened in 1910. The subject studied is pottery. "The department," says the principal, "is in charge of a skilled chemist who has a small staff working under him. An exhaustive survey of all the clays found throughout India suitable for the manufacture of pottery has been made, and specimens have been analysed. Standard bodies with their appropriate glazes have been discovered, and these have been worked up into articles of commercial value and artistic form and colours. A school of pottery is to be established and information on all points connected with the pottery industry is now available for the persons engaged in the trade. The ground has thus been cleared for the establishment of a pottery on modern lines in India."

438. In *Bengal* the Calcutta School of Art was reorganised in 1909 and divided into five departments—elementary, industrial, draughting, teaching, fine arts. A pupil first joins the elementary class, and, after working there for two years, undergoes a course of

about three years in one or other of the higher departments. The industrial department has classes for lithography, wood-engraving, modelling and wood-carving. Of the other departments, that of fine arts requires special mention. "The process of denationalisation," says the report, "has been arrested. The policy of installing Indian art in the place of supremacy which it ought to occupy in an Indian art school, and of inspiring the minds of the students with a desire to follow Indian ideals, has been continued during the quinquennium under review." The art gallery has been combined with the artware court of the Indian Museum and contains some of the finest available Hindu and Muhammadan water colours. There are 280 students. The cost of the school in 1911-12 was Rs. 44,312, of which all (save about Rs. 4,000 from fees) is defrayed by government.

There are three private schools of art in Calcutta. In Mr. Cumming's industrial report it is stated that one of them (the Albert Temple of Science), while professing an Indian character, uses European casts, drawing books and designs.

439. The School of Arts and Crafts at Lucknow to some extent serves the purpose of an art school for the *United Provinces* and has already been mentioned in paragraph 422.

440. The institution in the *Punjab* is the Mayo school of Art, Lahore. It has four departments—for elementary industrial work and drawing, for advanced industrial work, for draughtsmen and for teachers. New workshops are in course of erection, and cotton-printing, enamelling and pottery are about to be added to the course. Towards the end of the quinquennium, the school was busy with work for the Imperial Durbar. The principal, Sardar Bahadur Bhai Ram Singh, designed models for the amphitheatre, royal pavilion and daïs. There are 230 pupils.

441. It should be mentioned that the Bombay School of Art conducts drawing examinations, at which, in 1911, there were 9,437 candidates. The principal is not altogether satisfied with the result; and the resolution states that government have under consideration proposals for the reorganisation of the scheme and the appointment of an inspector of drawing. Other schools of art train teachers; the class at Calcutta has been adversely affected by the fact that the university no longer prescribes drawing as a subject for the matriculation. In Burma, where there is no school of art, a series of copies based on Burmese design has been prepared and is proving popular. *Instruction and examinations in drawing.*

442. There is a school of music for Europeans in Madras and there are also two schools for Indian music. There are three schools in Bengal, two of which receive aid. Band music is taught in some of the reformatory schools. *Schools of music.*

VII.—Commercial schools.

443. The subject of commercial education has recently attracted attention in India. The University of Bombay has instituted degrees in commerce. The University of Allahabad and the Punjab University have instituted a certificate in commerce. Furthermore there is a project for a commercial college of an advanced type in Bombay. The scheme has been sanctioned and the question is under consideration whether arrangements should be made at it for the organised study of economy and sociological problems. The existing schools, as stated in the resolution, did not attain a high standard of instruction and the training offered prepares for clerical duties rather than for the conduct of business itself. General commercial courses intended to take the place of the matriculation or higher examination are not popular, because the immediate benefit is not discernible. Institutions which give instruction in shorthand and typing in addition to or in the recognised courses have increased and are sought after because they lead to immediate and comparatively remunerative employment. The total number of schools has increased in the quinquennium from 12 to 28, the number of pupils from 584 to 1,543, and the expenditure from Rs. 25,343 to Rs. 82,278, of which government provides Rs. 28,344. Indigenous commercial institutions called *mahajani* schools teach the Indian system of accounts and reckoning. Some slight description will be found of them in paragraph 668. *Figures.*

444. The most important commercial school in *Madras* is that at Calicut, which has a fine building. It was utilised for turning out teachers for the commercial subjects under the school-leaving certificate scheme. A considerable number of the schools in this presidency are reported to teach only typewriting, an occupation the wages for which have risen. *Commercial schools in different provinces.*

445. Commercial education in *Bombay* is described as a plant of tardy growth. The most flourishing institutions appear to be the Commercial College, Bombay, the Commercial School, Sholapur, and Aiyar & Co.'s Business College, Bombay. Nothing is said of the course pursued. In a few high schools there are commercial classes.

446. The commercial classes in *Bengal* were transferred from the Presidency College in 1907 and became a separate institution under the name of the Government Commercial Institute. It offers a day course extending over two years and comprising modern English, commercial correspondence and précis-writing, commercial and mental arithmetic and geography, book-keeping, shorthand, typewriting, and commercial Bengali. Evening classes have been held in reporters' shorthand, political economy and mercantile law. The examinations are controlled by a board including representatives of the chambers of commerce. The report complains of the disposition of pupils to neglect all subjects for shorthand, typewriting and book-keeping, the difficulty of convincing employers that there is virtue in any of the subjects taught save the first two of these, the preference for university examinations, and the competition of private schools, which (says the principal) "are prepared to teach any one just as much or as little as he pleases, and that too at whatever time of the year it may be convenient to him, and at whatever hour of the day." It is needless to descant on the 'C' classes (a part of the 1901 scheme which also produced the 'B' classes) because in the last year only two candidates presented themselves. Apart from defects of the course it may be hazarded that the failure is attributable to the fact that, while the 'A' class leads to the university and the 'B' class to the technical school, the 'C' class could not be relied upon to lead anywhere. The 'C' classes have now been abolished. Seven private schools are chronicled, with 367 pupils.

447. In the *United Provinces* commercial teaching has been taken up at the mission colleges—St. John's at Agra, and the Reid Christian College at Lucknow, where, in addition to the usual subjects, general business methods are taught and, at the latter institution, an Urdu shorthand class and a normal department for teachers of commercial subjects in high schools have been opened. There is also, says the report, a young and aspiring business department at the Meerut College, which has recently been placed in charge of a European professor and is in receipt of aid. The institution of a commercial certificate by the university is said to have stimulated and focussed the work of these departments.

448. Commercial subjects are taught in the *Punjab* at aided continuation classes in Lahore, and in high schools. The former are managed by the Young Men's Christian Association and the Young Women's Christian Association, and a number of the students are said to have obtained posts on good salaries. In the latter, pupils are generally prepared for the university clerical and commercial examination (considered about equal to the matriculation) which attracts a small and diminishing number of candidates. The want of success which attended the opening of a considerable number of such classes in government schools points to the necessity for concentration. There is a clerical and commercial school at Amritsar with 61 pupils; the course prescribed for the university examination is followed.

449. On the failure of the 'C' classes in *Eastern Bengal*, six private institutions were opened. They are said to be more than self-supporting and to be doing good work.

Photo.-Mechl. Dept., Thomason College, Roorkee.

ALLAHABAD TRAINING COLLEGE.

Photo.-Mechl. Dept., Thomason College, Roorkee.

TRAINING COLLEGE, JUBBULPORE, EXERCISES.

Photo.-Mechl. Dept., Thomason College, Roorkee.

TRAINING COLLEGE, SAIDAPET, MADRAS.

Photo.-Mechl. Dept., Thomason College, Roorkee.

NORMAL SCHOOL, PESHAWAR.

Photo.-Mechl. Dept., Thomason College, Roorkee.

A GURU-TRAINING SCHOOL.

CHAPTER XI.

TRAINING OF TEACHERS.

I.—General.

450. The extent of the problem presented by the training of teachers is apparent from general table IX. There are 18,831 high school teachers, of whom 5,435 are trained. There are 24,493 teachers in middle schools, both vernacular and anglo-vernacular, of whom 9,038 are trained. Teachers in primary schools number 171,359 and those who have been trained number 42,554. The percentage of trained teachers to the number employed is thus 29 for high schools, 37 for middle schools, and 25 for primary schools. The number of teachers who annually pass with success out of the training colleges and schools is 5,019. The total number of teachers employed is 214,683. If we allow a wastage of 5 per cent. a year the number of teachers to be annually provided is 10,734. At the present rate not half the annual wastage can be replaced by trained men; and there is enormous lee-way to make up. The main retarding causes are the unpopularity of the educational service, which does not offer sufficiently attractive terms, the dislike of any special course of education which will delay entry into a profession, and a want of appreciation of the benefit of training. Another factor is the comparatively high cost of this form of instruction; on the average each student (male and female) under training costs government Rs. 140 a year—a fact which renders difficult the establishment of a due number of institutions. The problem is a difficult one. On its solution largely depends not merely the rescue of secondary education from the conditions which depress so many of the institutions, but also the lasting success of any scheme for a wider diffusion of elementary education. An expansion of training facilities, combined with better prospects for the educational employee, is the obvious remedy. *Amount of training required.*

451. The features of the quinquennium have been the increased attention paid to this branch of education, the steady growth in the number of institutions and pupils, a much wider extension in some provinces of the facilities for primary training, and, most striking of all, the establishment of secondary training institutions where none existed before. It is remarkable that in Bengal and Eastern Bengal and Assam, where the number of high schools for boys is over half of that of the whole of India and the number of English middle schools actually 1,537 out of 2,464, no institutions previously existed for the training of the host of teachers required in these schools. The existing colleges and systems for training secondary teachers have been reorganised and improved, especially in the matter of staff. Finally, at the close of the quinquennium, large re-organisation schemes were under contemplation in Madras (which would throw the work of secondary training entirely on colleges and high schools) and in Eastern Bengal and Assam for a great expansion of the facilities for elementary training and the entertainment of a better staff. The schemes have been sanctioned subject to certain reservations in the case of Madras *Features of the quinquennium*

452. Training institutions naturally divide themselves into those for secondary and those for primary teachers. The quinquennium has seen a further move towards general uniformity of organisation—colleges preparing both graduates and under-graduates (sometimes separately, sometimes together) to be secondary teachers; normal schools and schools or classes of lower grade instructing primary teachers or candidates for such posts. Madras and Burma still provide secondary training in institutions not of the collegiate grade. These two provinces also present some peculiar features in the matter of primary training. *Organisation.*

453. The total number of institutions for men has risen from 318 to 500, and that of students from 8,225 to 11,887. The total expenditure has *Numbers.*

increased from Rs. 10,68,969 to Rs. 17,76,193;* that from provincial revenues from Rs. 9,15,712 to Rs. 15,37,109. The cost per student (in the case of men) has risen from Rs. 134 to Rs. 156 a year, and the cost to government from Rs. 114 to Rs. 135. These institutions are mainly under government management, all the colleges save one and 335 out of 490 schools being controlled by the State. In the United Provinces 108 of the schools are under board management, in Madras 18, and in the Punjab two;† this makes a total of 128 board schools. Two of those shown in the tables are under native states. Twenty-four are aided institutions (of which 14 are situated in Madras) and one is unaided. Of the students, 8,601 are Hindus. Muhammadans have increased from 1,100 to 2,110.

Stipends and conditions.

454. Of training institutions in general, it may be said that the difficulty ordinarily is (save in the case of normal schools of certain provinces) to attract students to them, and to keep them to the career of a teacher afterwards. Fees are not required save in special circumstances, *e.g.*, in Madras fees are charged from students who come from outside the presidency. Teachers deputed for training receive the full pay‡ of their substantive posts. Private students (*i.e.*, those who are not yet in employ) receive stipends—from Rs. 15 to Rs. 50 a month in the case of graduates, from Rs. 12 upwards in the case of under-graduates; pupils in normal schools generally receive a very small stipend, pupils of lower vernacular institutions Rs. 6 to Rs. 10. The difficulty of ensuring that the trained teacher practises his profession is greater in the case of elementary than of secondary teachers. Nor, among the former, are those already in employ at the time of training so likely to adopt another career as are candidates who, not merely having received a gratuitous education but actually having been paid to receive it, are tempted to utilise that education for purposes more lucrative than a vocation where the initial pay is often no more or but little more than the stipends they had previously been drawing. The measures taken include insistence upon agreements and the prospect of special terms after training. The former practice is confined to certain provinces and was extended to students of training schools in Eastern Bengal and Assam during the quinquennium. As to the latter, it has been laid down in Bengal that the promotion of teachers in government schools shall depend upon the attainment by them of a degree or a diploma in teaching; and graduates entering the subordinate service must give an undertaking to go through a course when required. Some provinces, as for instance Bombay, are beginning to prescribe a higher rate of initial pay for elementary teachers. Of this more will be said presently. But the complaint comes from some quarters that sufficient is not done for the trained teacher to recompense him for the time spent in training.

Attendance at special institutions.

455. A characteristic of training courses of various standards in India is that attendance is necessary at an institution specially designed for instructing in the courses and for superintending practice. The universities insist on this; and the departmental diplomas (save under certain conditions in Burma) require the previous prosecution of study in a school recognised for this purpose. The fitness of the institution varies from the college staffed with European specialists and Indian graduates to the *guru*-training school of Bengal with an instructor on less than £15 a year or the ordinary vernacular middle schools deemed capable of receiving apprentices. But the fact remains that the diploma of training requires attendance at a training institution; and provision is ordinarily made for residence on the spot, for physical exercises and for an ordered life that contributes in no small degree to the value of the course.

Practising or model schools.

456. Another feature common to all these institutions, of whatever grade, is the practising or model school attached. The question of its correct use constantly arises. There has been a tendency during the period to replace practising schools, in which the students under training do a portion of the teaching work, by model schools in which they attend lessons delivered by a regular staff, make notes and occasionally themselves take part. Thus we learn from the Madras report that the practising schools were often poorly

* Excluding the training colleges for women.

† These two are of a purely temporary nature.

‡ Sometimes up to certain limits; *e.g.*, in the Punjab up to Rs. 40, above that three-quarters,

attended because the teaching was indifferent, the training staff had to devote too much time to improving it, and those under training were unable to pay sufficient attention to the improvement of their general education. These remarks may be taken as of general application to different grades of institutions though not of equally full application to all. Larger institutions, such as colleges, either have a special high school attached to them on the premises for this purpose, or use one or more already existing schools near by. Institutions of lower grade (such as the *guru*-training schools of the Bengals) ordinarily have an elementary school in the same building. Model elementary schools have been established in Madras with excellent results. Sometimes this system is combined with a limited period of regular teaching. At the Lucknow College for under-graduate teachers each student is required to take six weeks' teaching under normal conditions in one or other of the high schools that have offered themselves for this purpose. It is said that the greater stress and attention given to this side of the training has been thoroughly beneficial. There is a similar scheme in some of the vernacular normal schools of the Punjab. Thus, at Rawalpindi, the model school was run entirely by the pupil teachers for nine continuous weeks, each student working for five days; and at Multan every student taught in the model school for about three weeks on an average. The suggestion may be hazarded that (though practice cannot be dispensed with) the model lesson is suitable in the case of the secondary teacher, whose better education enables him to understand principles and imitate intelligently, and whose after-work will be carried out before a (potentially) well ordered and quiet class in a single room among surroundings favourable to the application of a theoretic and methodic grounding. The elementary teacher, on the other hand, must not only watch, but also, to a far larger extent than the graduate, practise the very activities in which he will subsequently engage. His mental calibre demands rules of thumb learned by actual application; his teaching will be done in the pell-mell of an elementary school, where several classes of different ages are probably seated in a one-room building and ready resort must be had to shifts and devices in order to overcome difficulties. In this connection, the inspector of Kumaon (United Provinces) writes :—

> " A novel feature, in the practical work of the training classes, has been introduced during the year to remedy a defect which has often been remarked in connection with the subsequent school work of teachers trained in these classes, *i.e.*, their comparative inability to handle successfully more than one class at a time. To put three or four classes under one teacher may not be an ideal arrangement, but it is unfortunately inevitable in the great majority of lower primary schools, and it seemed only common sense to give teachers under training in the training classes an opportunity of acquiring facility in carrying on such work. Accordingly it has now been made the practice in this training class and in most of the other training classes of the division to set one pupil teacher to conduct several classes simultaneously, the others looking on and criticising, and when this is done once a week or so it is reported that good results are gradually attained."

Staff of training institutions.

457. The staffing of these institutions is of vital importance. By reason of the difficulties of classification, the subject may be conveniently treated here. (It is to be understood that when pay is specified it means monthly pay.)

Colleges which train graduates ordinarily have a principal and a vice-principal in the Indian educational service. Bombay and the Central Provinces are exceptions and have only one member of that service. The rest of the staff varies considerably from one province to another. As examples may be taken the college at Saidapet near Madras, which has nine assistants on pay ranging from Rs. 75 to Rs. 250, seven assistants on low pay, partly for the practising school, a drawing master, a drill master, a lady (happy thought) for the instruction of the infants in the school, and a large temporary staff; and the college at Dacca, which has three assistant professors in the provincial educational service (Rs. 200 rising to Rs. 700).

Colleges or English training schools for under-graduates naturally have a less expensive staff. The colleges of this nature at Patna and Lucknow have European principals with special pay rising in the one case to Rs. 700 and in the other to Rs. 500. And with these may be classed the large schools at Rajahmundry (Madras) and Rangoon. The former (which was

till recently a college) has a headmaster in the Indian educational service and a numerous staff on pay varying from Rs. 40 to Rs. 200.

But here a difficulty arises. For in Madras and Burma* the training of English and of vernacular teachers is conducted in the same institutions. In addition to the two large schools just mentioned, there are other schools. These are staffed in Madras by headmasters on Rs. 40 to Rs. 60, two to four assistants and a gymnastic master, while the model schools attached have headmasters on Rs. 20 to Rs. 25 and four or less assistants. In Burma the headmasters of these schools range from Rs. 100 to Rs. 400, with four or more assistants on pay varying from Rs. 50 to Rs. 250, and in all cases a teacher of Sloyd.

In other provinces vernacular is mainly distinct from English training. The higher vernacular schools (*i.e.*, training or normal schools) are staffed as follows. In Bombay (where they are designated colleges) the headmaster is ordinarily on Rs. 400, and is assisted by an ample staff on pay ranging from Rs. 30 to Rs. 200, inclusive always of teachers of gymnastics, and sometimes of manual training, drawing or music. In Bengal the headmasters ordinarily draw Rs. 200 and the staff from Rs. 50 to Rs. 60. The schools of the United Provinces have headmasters on pay ranging from Rs. 100 to Rs. 200, each assisted by four teachers on Rs. 40 to Rs. 100, and a drill master. In the Punjab each school has a headmaster on Rs. 120 up to Rs. 200, and five assistants (including a drawing master) on Rs. 45 ranging to Rs. 100. In Eastern Bengal the headmasters of training schools are in the provincial educational service (Rs. 200 rising to Rs. 700); in Assam they are on fixed pay of Rs. 60. In the Central Provinces the pay of headmasters is Rs. 100 ranging to Rs. 200, and each school has generally six assistants on pay ranging up to Rs. 80. The North-West Frontier Province has one school, of which the headmaster receives Rs. 120.

Lower vernacular training is carried on in most of the normal schools just mentioned, in ordinary middle schools and also, in the Bengals, in small institutions called *guru*-training schools. In these last there are three instructors on Rs. 18, Rs. 10, and Rs. 8, respectively, who, as well as teaching the students, look after the attached model schools.

Cost of training.

458. In this connection it will be interesting to consider the average annual cost of a student in a training school for masters in each province. The figures are—Madras, Rs. 147; Bombay, Rs. 171; Bengal, Rs. 113; United Provinces, Rs. 126; Punjab, Rs. 154; Burma, Rs. 465; Eastern Bengal and Assam, Rs. 105; Central Provinces, Rs. 160; Coorg, Rs. 174; North-West Frontier Province, Rs. 289; the average figure for all India is Rs. 131. The differences are due to the character of the staff and to the numbers under training. In Bengal and Eastern Bengal and Assam the cost is particularly low because the figures for the cheaply run *guru*-training schools are included. The figure for Burma is high, because the school serves the purpose of an English teachers' college.

Buildings.

459. Training colleges generally have good habitations of their own. The college at Bombay, however, has no building and occupies two class rooms in the Elphinstone High School. It also lacks hostels and playing grounds. The David Hare Training College at Calcutta does not possess very satisfactory accommodation. The buildings of the numerous training schools vary considerably. The larger normal schools have generally good houses of their own. Where there are large numbers of lower institutions difficulty naturally arises. In the Bengals, where these schools are very numerous, the buildings, which were regarded as of a temporary nature, were deplorable at the beginning of the quinquennium. Type plans were prepared and a large amount of money has been expended. The grants which have been given for training institutions should permit of considerable improvement in this respect. The erection of hostels has been a satisfactory feature.

Classification.

460. The present chapter contains a description of institutions given in a general way and taken class by class. There has been to some extent, as remarked above, an approximation of systems in the various provinces. But

* This statement needs to be qualified by the further statement that in Burma the anglo-vernacular and the vernacular departments, though often situated in the same building, have distinct staffs. In the former departments the pay of the headmasters ranges from Rs. 300 to Rs. 400, that of the assistants from Rs. 100 to Rs. 250; in the latter from Rs. 100 to Rs. 200 and from Rs. 50 to Rs. 100 respectively.

the different organisations still offer points of difference sufficient to make generalisation no easy task. Accordingly, at the risk of some repetition, a description of institutions province by province is added in appendix XXIV.

It is also to be remarked that different systems of classification to some extent vitiate the figures found in the general tables, while the classing together in returns of schools of varying types renders impossible a complete numerical analysis.

II.—English training institutions.

461. Institutions for the training of teachers in English classes fall into two broad divisions—colleges and schools. The former prepare graduates for high school masterships. The latter prepare those who have passed the intermediate or the matriculation (or its equivalent) or (as in Burma) merely a standard of the secondary school course to be assistant teachers in high schools, headmasters of English middle schools, etc. The classification, however, is not precise. Sometimes a college teaches students of both these grades; sometimes (as at Patna and Lucknow) it teaches those only of the lower grade; and Burma has no college, but instructs its teachers of all grades in schools. This difference of arrangement and nomenclature introduces inevitable confusion into the tables; and Bombay, which calls even its vernacular normal schools by the name of colleges, classes its English teachers' college with these in the category of schools. *Colleges and schools.*

462. There are (exclusive of the class for Europeans at Sanawar) ten colleges for the training of male teachers for secondary schools. In 1907 there were six colleges. The college at Rajahmundry (Madras) which was always regarded as a temporary expedient has been closed, or rather amalgamated with that at Saidapet. On the other hand five new colleges have opened. The number of old and the number of new institutions are thus equal. Those which previously existed include the following:—The Teachers' College at Saidapet, near Madras, is now the only college in that presidency. It is a well-found and well staffed institution. The secondary teachers' training college at Bombay is classed as a school. It was opened about the close of the preceding period and is housed in the Elphinstone High School. The third and fourth are the Training College at Allahabad and the Central Training College at Lahore. The fifth is the Training College at Jubbulpore in the Central Provinces, which though in previous reports classed as a college was raised to the collegiate grade during the present period. Of the new colleges four are in the Bengals, namely, the David Hare College in Calcutta and the Patna and Dacca Colleges; likewise the London Missionary Society's Training College at Bhawanipur (the one aided college for male secondary teachers). The fifth is the new college for under-graduates at Lucknow. Owing to the omission of the Bombay College the precise number of students cannot be shown; but (if we exclude 15 students at Sanawar) the general table shows 507 students against 367 in 1907. Similarly, the expenditure, which was just over two lakhs in 1907, is now Rs. 3,11,539, nearly three lakhs of which is met from provincial revenues. (*i*) *Colleges. Number.*

463. The colleges are mainly intended for the training of those who are already teachers of government and other high schools and of those who intend to become teachers. Stipends are paid to the latter, their pay (or some portion of it) to the former. In *Madras*, the director sanctions the stipend, which in the case of a teacher may not exceed the pay of his substantive post, or in the case of a candidate up to Rs. 50 a month.* The ordinary number of collegiate stipends is 40, but the director may admit a larger number of stipendiaries. There were 99 students in 1912. At *Bombay*, the selection of stipendiaries by the college has been changed to a system of deputation of teachers by the director—twenty-nine from government and five from aided schools. At the David Hare College (*Calcutta*) twenty or (including inspecting officers) twenty-four graduates form the limit of the class. A certain number of places are reserved for private students.† At the *Patna* College (which teaches the course for the licentiate) *Admission and stipends.*

* Ordinarily, stipends of Rs. 15 are given to those fresh from college or from private schools; and these form the great majority.

† It is stated that in practice only government servants have been admitted.

admissions are limited to twelve a year; private candidates, previously admitted with stipends of Rs. 35 a year, are now enrolled only when government teachers are not available to fill the vacancies—a restriction which is regarded as a mistake by the principal. At *Dacca* the full pay is given to a teacher, and stipends of Rs. 20 and Rs. 15 to private students in the degree and licentiate classes respectively. There are at present 37 students in the college, of whom 25 are already in government service, six are teachers in private employ, and six are candidates. Seventeen are taking the B.T. and twenty the L.T. course.

The colleges in the *United Provinces* appear to admit only candidates. The Allahabad College offers 30 stipends, the value of which has recently been raised from Rs. 15 to Rs. 20. At Lucknow there are 48 stipends—24 for those who have passed the intermediate, and 24 for those who have passed the matriculation or its equivalent. At *Lahore* the allowance payable to teachers of government and board schools under training has been raised to the full amount of their pay, save in the case of those whose pay exceeds Rs. 40, when three-fourths are given. The amount of stipends for candidates is Rs. 18. The number of students in this college is large—229; but the institution contains lower secondary and also vernacular classes. At *Jubbulpore* the college admits teachers on three-fourths of their pay and candidates on stipends of Rs. 15.

University degrees and courses.

464. All universities save that of Bombay have now instituted degrees or diplomas for those who intend to follow the profession of teaching. In the case of the universities at Madras, Lahore and Allahabad the course is purely a post-graduate one. The Calcutta University alone offers, in addition to a bachelorship of teaching for those who are already graduates in arts or science, a licentiate in teaching for those who have passed the intermediate. It follows that the university courses are pursued at all colleges for English teachers save at Bombay, at Lucknow (where the institution has been specially established for under-graduates), and in Burma where the examinations are under the control of the department and of the Educational Syndicate. At Lahore and at Jubbulpore (Central Provinces) both university and departmental courses are studied. In other words, the colleges sometimes follow only the university course, sometimes only a departmental course and sometimes both. Occasionally it is found desirable to give instruction in additional subjects other than those prescribed by the university in classes which are being prepared for the university examinations.

In *Bengal* the degree of bachelor of teaching may be taken at any period subsequent by more than a year to the passing of the bachelorship in arts or science. The licentiate in teaching is obtained at least two years after passing the intermediate in arts or science. The course for the B.T. includes the theory and practice of teaching in relation to mental and moral science, methods of teaching specific subjects and school management, the history of educational ideas and methods and a selected educational classic or classics. The examination on these subjects is by means of written papers, but it is also necessary for a candidate to have undergone either a course of practical training consisting of not less than fifty lessons for a period of six months at a training school or to have served as a teacher at a recognised school for one year previously to the examination; and a feature of the test is a practical examination in teaching by means of lessons delivered by the candidate to a class in certain selected subjects. The course for the licentiate is similar to that for the degree save that the history of educational ideas and methods is not prescribed and a selected course in modern English prose and poetry is added. At least two years must elapse after the passing of the intermediate for the licentiate to be obtained. The *Madras* University prescribes a course only for post-graduates. It is of a year's duration. The examination is a written test in the theory and practice of education (including the elements of physiology and psychology, reasoning, knowledge and language, planning of courses, correlation of studies, classification, examination and methods appropriate to certain subjects), history of education and practical training. The *Punjab* University offers a degree of bachelor of teaching to graduates in any faculty save the oriental who have undergone a course of training for one year. The course includes principles of education, methods of teaching, and a fuller study of the methods of instruction in selected subjects. Written papers are set upon these subjects and a practical examination is prescribed for practical skill in teaching. The University of *Allahabad* offers a diploma of licentiate of teaching to graduates in arts or science after a year's study. A written examination is conducted in the theory of teaching and every candidate is required to have passed through a practical course of physical training

and also to give satisfactory evidence of his ability to teach and manage a class. He may also offer himself for a test of special fitness, for teaching one or more branches of the high school curriculum.

465. Where, as in Bombay, the university offers no degree or diploma in teaching, or where classes for students of lower qualifications are attached to colleges teaching the university courses, the departments of public instruction prescribe their own curricula and conduct their own examinations. An exception is the system in the Bengals, where the university prescribes for and examines graduates and under-graduates alike. *Departmental courses.*

The college at *Bombay* admits both graduate and non-graduate teachers. The course is of one year and includes method, psychology and the history of education, as well as demonstration and criticism in which the staff are mainly employed. The training college at *Lucknow* admits those who have passed the matriculation (or the school-leaving certificate) or the intermediate examination—the former to a two years' course and the latter to a course of one year. The examination is partly written and comprises papers on general knowledge of English (including composition and conversation), arithmetic and geometry, and on the theory and method of teaching. It is partly practical, the candidate conducting lessons before a board. The *Punjab* College in addition to the university course for graduates (and the vernacular course) offers two other courses for matriculates or for those who have passed the intermediate (provided that the latter have also studied for the B.A. for two years or have passed the junior certificate in the first division) leading up to examinations called respectively the junior and the senior anglo-vernacular certificate examinations. The course is now of two years in the case of matriculates, in other cases of one year. It includes ordinary instruction in English, mathematics and (for the senior class) science, intended to broaden the knowledge of the candidates; and also in school management, criticism lessons and gymnastics. The training college at Jubbulpore in the *Central Provinces* while adopting the licentiate course of the University of Allahabad has retained a lower course extending over two years. The course includes the principles, history and practice of education. Special subjects may be taken. The test is partly written and partly oral. *Burma* has no college and the arrangement for training anglo-vernacular teachers will be noticed below.

466. The method of teaching in the colleges is by lectures, essays, and model and criticism lessons in the attached high school. The following remarks are made by the principal of the David Hare College. The aim of the training courses is "to give the teacher an all-round preparation for his work, both from the theoretical and the practical points of view. On the one hand, he needs a knowledge of the subjects which he has to teach, an acquaintance with the nature of the pupil's mind and of the principles which underlie the teaching art, and some knowledge of the history of education in the past. On the other hand, he learns by actual practice in the school room to control and teach his class. The theoretical training has been imparted by means of lectures on the theory and practice of teaching in relation to mental and moral science, on the methods of teaching school subjects and of maintaining discipline, and on the history of education. Weekly essays on appropriate subjects have been written by the students, and the library as an aid in preparation has been at their disposal; also test papers are periodically set by members of the staff. As to the practical training, each student attends the demonstration lessons by the staff; each has to prepare and give under supervision lessons in the schools; and each has to watch and criticise lessons given by the other students of the college." The course also includes teaching English by the direct method to a class of young boys knowing little or no English at the commencement of their teaching in the Hindu School, and the Training College students make themselves responsible for the subject throughout the year. "The results," says Mr. Griffith, "have been surprising, as the boys now follow any lesson of a simple character that is given in English." At the Lahore College there are daily lessons in the science of education and the art of teaching, specimen lessons delivered weekly by the masters of the practising school, practice in teaching and managing classes for two or three weeks during the session, and daily criticism lessons. *Method of training.*

467. The annual cost of educating a student in a training college for males and females is Rs. 348 in Madras, Rs. 1,098 in Bombay, Rs. 1,163 in Bengal, Rs. 722 in the United Provinces, Rs. 414 in the Punjab, Rs. 1,077 in Eastern Bengal and Assam, and Rs. 794 in the Central Provinces; the average *Cost of training.*

figure for all India is Rs. 587. The difference in cost depends not so much upon the remuneration and size of the staff in the various institutions, but rather upon the number of students admitted. Thus, the numbers of students at Saidapet and at Lahore are 99 and 229, respectively (and vernacular students are included in the latter college). The Hare, Dacca and Patna Colleges contain together only 63 students.

(ii) Schools.

468. Secondary training institutions of the lower grade exist because there are not enough graduates to staff all English teaching schools. It is therefore necessary to train as teachers a certain number of undergraduates—those who have passed the matriculation or the intermediate. Figures of pupils cannot be given, since they are mixed in the returns with those in vernacular schools. Moreover, as will have been gathered from the preceding section, they are sometimes shown among the numbers at collegiate institutions.

Organisation.

469. The arrangements in different provinces fall into three classes. (*i*) Sometimes, as just stated, the college trains both graduates and undergraduates. This is the case in *Bombay*, in the *Punjab*, in *Eastern Bengal and Assam* and in the *Central Provinces*. A description has already been given of the college courses in those provinces, and nothing more need be said. (*ii*) In *Bengal* and the *United Provinces* the instruction is imparted in each case in a single institution designated a college, but separate from the college in which the post-graduate course is taken. At the Patna Training College in *Bengal* the course for the licentiate in teaching of the Calcutta University is taught. Allusion has already been made to the Lucknow College. (*iii*) *Madras* and *Burma* have a number of institutions for secondary training. *Madras* has eight such schools with 154 under-graduate pupils, who have generally had some experience in teaching and expect employment in the lower classes of secondary schools or as headmasters of elementary schools. The course is purely professional, is conducted in English and extends over a year. An important scheme of reorganisation is under consideration, which will prolong the course to two years, increase the general knowledge of the pupils and render the instruction more practical. In *Burma* (which has no college) both anglo-vernacular and vernacular certificates are obtained after study in the normal schools, which number eight and may or may not contain anglo-vernacular classes. The system has been changed during the quinquennium. Previously, a pupil had to have attained a certain standard in the ordinary school or university career before he could be admitted to either of the courses prescribed (and save in the highest grade) to have attained a higher standard as well as undergone training before he could earn either of the three certificates; now, while three kinds of certificates are still offered, a single course extending over two years suffices for the earning of the primary or middle school certificate, and also serves as the groundwork leading on to a third year of study and a high school certificate. A pass by the primary certificate now merely means that the candidate, while not failing completely, has failed to secure a middle certificate. Previously qualification for admission to the primary course was the fifth standard; now it is the seventh standard; and the minimum age has been raised from twelve to fifteen years. Previously, the qualifications for a certificate of the two lower grades were (in addition to training) the seventh standard and the matriculation respectively; now special and harder literary tests have been substituted; and a whole-time training course at a normal school is prescribed. Previously, untrained candidates were allowed to appear at the professional tests (which are held by the educational syndicate); now only teachers may appear under certain conditions. It will be observed that there are no institutions for training secondary teachers in the *North-West Frontier Province*, teachers for that province are trained at Lahore.

Admission and stipends.

470. The pupils admitted to these institutions are generally matriculates or those who have passed the intermediate; in some cases, as in Burma, they need not have passed the matriculation. Of the supply and quality of pupils at Lucknow, Mr. de la Fosse says:—"Formerly there was some difficulty in securing candidates, but it no longer exists, and quite a number of applications for admission have annually to be rejected for want of room

For men who do not proceed to college education seems to hold out as good a career as any other profession or occupation. The quality of the material for training remains rather mediocre. Intermediate applicants are not forthcoming in sufficient quantity and there is a preponderance of men who have passed only in the third division. This meagreness of intellectual and educational equipment constitutes a serious drag on the efforts of their instructors." In view of the fact that the students are sometimes included in colleges, sometimes in schools, it is not possible to state the amounts of stipends with precision.

471. It is unnecessary to enlarge upon the courses and methods pursued. These have been sufficiently indicated in paragraph 465, which gives in brief the curricula followed in some of these institutions. Generally it may be said that attention is given to enlarging the knowledge of the student in addition to his professional preparation for the work of a teacher. *Courses and Methods.*

472. The problems and the tendencies which have manifested themselves in the organisation and courses of secondary training institutions during the quinquennium are summarised in the following paragraphs. *(iii) General characteristics.*

473. It is coming to be recognised that colleges should confine themselves to the work of training graduates. Those who have not already taken a degree are not admitted to the colleges at Saidapet, Calcutta or Allahabad. Of the last named Mr. de la Fosse says, " The single training college (formerly) admitted both graduates and under-graduates, thus attempting the impossible task of training M. A.'s and entrance passed men together." This led to the opening of the Lucknow College. On the other hand, it may be observed that the supply of graduates is insufficient to provide the number of assistant teachers now required in high schools or of headmasters of middle schools. And, where arrangements cannot be made, as in the Madras presidency, at Patna and at Lucknow for the training of under-graduates in one or more separate institutions, considerations of economy, etc., have hitherto kept the under-graduate classes under the same roof with those for graduates. The difficulty of this arrangement is mitigated where only those who have passed the intermediate are admitted. It is noticeable that in the Bengals (where the supply of men with higher qualifications is probably larger) the training of matriculates has not been attempted. In Burma, where the supply is limited, those are admitted who have not even matriculated. *Qualifications for admission.*

474. Owing to the unpopularity of a two years' course the period of training has in some cases been reduced to one year. The report from the Punjab undoubtedly shows that the change has increased the numbers in the college at Lahore. It is also stated to have induced a number of young men of the right type to take up educational work and to undergo training. The principal of the college, while considering the class of students obtained in this arrangement to be excellent, admits that the effect of the change has yet to be estimated. The principal of the Dacca Training College, on the other hand, is convinced that the B.T. should be a two years' course. " The first year," he says, " would be devoted to the content and special methods of teaching of school subjects. We find that some subjects, especially history and geography, have not been touched since the student was in class VII of the high school and even earlier, and the impression is that any one can teach them so long as he is a few hours in advance of his class, or even if he has the advantage of a book in his hand. While we try to remedy this as far as we can, we find the time-table far too crowded." In 1908, the principal of the Bombay college recommended the extension of the course to two years. *Length of training.*

On the other hand it is more generally recognised that the lower grade training should extend over two years, and the course for the junior anglo-vernacular certificate for matriculates has been extended in the Punjab to that period. A similar proposal has been made in Madras.

475. The Punjab University has relieved its course and at the same time rendered it more practical by substituting a fuller study of the methods of teaching for the lives of eminent teachers and the systems of instruction in foreign countries which were previously included. *More practical courses.*

Greater attention is paid to manual training (not merely as a subject which the student may hereafter be called upon to teach, but also as an education in itself), to observation and to skill in physical training. Of the Allahabad college it is remarked that a novel side of the training is the course in the manual workshop. Twenty-five men have passed this course, taken readily to the work and shown in not a few instances considerable aptitude. The principal writes that they have "learnt the difference between accuracy and vagueness, they know what perseverance means, and have gained, what most Indian teachers lack, a respect for work done with the hands." At the Lahore college a workshop for manual training has been erected and application has been made for the engagement of a skilled European instructor with the object of organising classes in educational handiwork on modern methods. All the schools in Burma have instructors in Sloyd.

Supplementary subjects.

476. At Dacca, while the university curriculum forms the basis of instruction, it is supplemented by weekly excursions to places of interest, such as the government farm, the bacteriological laboratory and the museum of the medical school. Criticism lessons are given of which the subject matter is prepared by the students themselves from original observation of the things and processes dealt with. Black-board work is made a special feature and each student learns how to teach physical exercises.

Specialisation.

477. The importance of specialisation is beginning to be realised. "Thanks," says Mr. de la Fosse, "to the enlightened policy of the university candidates may offer themselves for special examination in particular subjects of high school education. Probably more and more attention will be paid to this aspect of the work as time goes on. Its great value is at present to emphasise a fact, which is often overlooked, that a course in the principles of teaching or even practice in teaching cannot help a teacher much unless he has knowledge and grasp of his subject." At Lahore, too, each student specialises in science, history, geography, mathematics or English literature by writing out full teaching notes of twelve connected lessons in his special subject. A class for the instruction of science masters in the methods of teaching is held for a month each year in the Victoria College of Science at Nagpur. A special class for training high school teachers in geography (a particularly ill-taught subject) has been opened at Dacca and is said to have done good work. In order to produce efficient *maulvis* who would combine a knowledge of English with Persian and Arabic, two years' courses were opened at the Dacca and Chittagong *madrassas*, but have not proved successful. At the same time, the bulk of the teaching is directed to the attainment of method applicable to all subjects indiscriminately. For the trained teacher when he joins his school is often placed in sole charge of the work of a class; such an arrangement is desirable in junior classes; in the higher standards a certain amount of specialisation is an advantage.

Effects of training.

478. The reports speak highly of the work of trained teachers. The strength of the staff and the possibility of bestowing individual attention upon pupils in comparatively small classes render good results possible. The examiners of the Lucknow college say:—"Taking it on the whole the results of the practical examination this year are very encouraging. The training given has evidently been of a very practical and stimulating nature and the pupil teachers themselves are evidently quite conscious of the benefit they have derived from their course. They have at any rate learnt to handle their classes properly and have gained ideas as to what to aim at in their lessons and what to avoid. They have learnt how to prepare a lesson and how to use their black-board and how to make use of illustrations. They have seen a variety of methods employed and their ideas have been enlarged. They have gained confidence in themselves and have learnt to take pride and interest in their work." The influence of trained teachers upon the instruction of the institutions they subsequently join is beneficial. "The weakest point of the system," says the Bombay report, "may be described as the turning out of enthusiastic reformers impatient of ancient methods who are sent to schools where these modern ideas are regarded as heresies and these innovations viewed with dislike and distrust." It is desirable (says the principal of the Bombay college) that headmasters know more of the work of the

institution—"it often happens that they require from men trained here—especially in English—the observation of conditions which make work on new lines unfruitful or impossible." The same report adds:—

"In its endeavour to train and help the secondary teaching 'public' of Bombay the college has failed—owing to the indifference and apathy of the said public. Hundreds of teachers—many of them in schools close to the college—could have attended (free and at convenient hours) six different courses in the most important branches of professional knowledge during the last three years of the quinquennium. In spite of full advertisement and cordial invitation the open lectures of the college were completely ignored by the untrained secondary teachers of Bombay. As the output increases and the scope of influence is widened, a tradition will spring up and the full influence of the training operations will be felt."

III.—Vernacular training institutions.

479. The training of vernacular teachers, like that of secondary teachers, may be regarded broadly as of two grades. (*a*) Normal schools train those who have passed the middle vernacular standard (if such are available) as assistant vernacular teachers in secondary schools and as headmasters of upper primary schools. (*b*) Those who have passed the primary standard are trained as elementary or lower primary teachers in smaller schools, as apprentices in selected middle schools or in classes of lower grade attached to normal schools. Some provinces have arrangements for re-training vernacular teachers, or for giving short courses. *Normal and elementary schools and classes.*

480. *Madras* has 45 training schools (including the eight previously mentioned as belonging to the secondary grade—since all schools have the classes below the grade after which they are named). The pupils number 2,398. Among these are both higher and lower elementary candidates. *Bombay* has five vernacular teachers' colleges, one training school managed by government, and one managed by the American mission. The course is of one, two or three years according as the pupil aspires to be held eligible for a rate of pay of Rs. 12, Rs. 15, or Rs. 20 to Rs. 25 a month. Exclusive of a school managed by the Baptist mission at Serampore which sends in no returns, there are eight such training schools in *Bengal*—seven managed by government and one by the Church Missionary Society. Pupils number about 480. Those are admitted who have passed the primary standard and the course is of three years. The schools were previously divided into those of the first and second grade according to their standard and efficiency. Only one government school and the school at Serampur are now classed as second grade. There are seven normal schools in the *United Provinces*. The number of pupils has been purposely reduced from 707 to 466, because the classes were too large for efficient instruction and because the lower number provides enough teachers in secondary and upper primary schools. There are five normal schools in the *Punjab*, with 415 pupils. The stipends have been raised to Rs. 8 and the course reduced to one year. The eight normal schools of *Burma* have already been mentioned in connection with their anglo-vernacular training classes. Including those classes, the total under training has fallen from 448 to 329, the reduction being partly the result of the reorganisation presently to be described. *Eastern Bengal and Assam* has five training schools, two of which are in Assam. The number of pupils is 422. The course is of two years save in the case of teachers, where it is one year. The normal schools in the *Central Provinces* have recently increased from four to six, the new ones being a divisional school at Khandwa and an Urdu normal school at Amraoti. The number of pupils is 364. An experiment is being made at two of the schools of a course reduced from two years to one year. The Peshawar normal school instructs teachers of the *North-West Frontier Province* in a one year's course. Though the number of stipends has been raised to 100, the number of pupils is 59—the middle standard being required for admission and the supply of those who can comply with this condition being limited. The establishment of the elementary teachers' service and the opening of new vernacular middle schools will, it is hoped, remedy this. The school has recently been housed in a charming building called the Mihman Khana. The illustration of this school is of peculiar interest. It shows the Pathans of the frontier tracts, who are destined to become teachers in remote (*i*) *Normal or training schools.*

and insecure villages. In the centre are seated Sir George Roos-Keppel, the Chief Commissioner, and Mr. Richey, the director of public instruction. On the ground are seated the boys of the practising school.

(ii) Lower vernacular institutions.

481. Elementary teachers are trained in various forms of institutions. If in employ, they sometimes receive the pay of their posts, sometimes a stipend which varies from Rs. 5 to Rs. 10 a month; the latter is also the arrangement for candidates. The training is imparted in the normal or training schools described in the preceding paragraphs, and also in inferior institutions. Mr. Orange described these latter as existing in Bengal, the United Provinces, Eastern Bengal and Assam and the Central Provinces. To this list must now be added Bombay. The special facilities offered may thus be divided into three classes :—

(*a*) training in normal schools,

(*b*) training in special schools of lower grade,

(*c*) training in apprentice classes.

(a) Training in normal schools.

482. The first system is common to all provinces in that a youth, trained at a normal school, may subsequently find himself teaching in a lower primary school. Ordinarily, however, the ex-pupils of these institutions are employed in middle or upper primary schools. The system is especially found in Madras, Burma and Assam, where (save for a few moribund apprentice-classes and small schools for hill-races in the last mentioned) the same institutions train higher and lower elementary teachers and are especially adapted for this purpose, and to a small extent in Eastern Bengal. It has also been started in Bombay. Thus, the 45 training schools in Madras, which have been already mentioned, contain lower as well as higher elementary classes—the former for the reception of those who have passed only the fourth standard and undergo a two years' course.

The normal schools of Burma admit students of lower grade, but no longer those who have passed only the fourth standard. Even for the primary course the initial qualification now demanded is a pass by the sixth vernacular standard. The reorganisation of which this reform is a part has already been described. It may be mentioned that, in Eastern Bengal, classes specially for elementary teachers have been added to the training schools at Dacca and Chittagong. In Assam (as well as the other arrangements presently to be described) the two divisional training schools at Jorhat and Silchar contain special classes of sixty pupils, where lower primary teachers and candidates are instructed. The former receive their full pay from the boards, the latter stipends of Rs. 6. The teaching is separate from that imparted to the higher pupils. The defect of the course is that it is only of six months and so makes little impression. Part of the reorganisation scheme framed by the Government of Eastern Bengal and Assam was to establish two large schools for lower teachers in this area, with a course of one or two years according as the pupil has, or has not, been in previous employ.

(b) Training in special schools of lower grade.

483. The system of special schools for elementary teachers exists mainly in the two Bengals. The institutions are called *guru*-training schools and are described in Mr. Orange's report. They were ill-housed—for the idea was that they should be removed as soon as the training of any area was accomplished. They were ill-staffed—for economy forbade efficiency. They were ill-attended—for the total number of stipends tenable in each was ten, the stipends were inadequate, and the *gurus* were constantly absent attending to their own schools lest these should be appropriated by others in their absence. The typical school was a ramshackle building of mud or bamboo, containing three instructors on Rs. 18, Rs. 10, and Rs. 8 respectively, with a handful of unwilling students in one room (generally *gurus* of surrounding schools) and an elementary school for practising purposes in the other. In both provinces improvements have been made during the period, and further improvements are contemplated. Better buildings have been erected. In Bengal type plans were framed for schools and hostels; construction and repair have been transferred from the education to the public works department; over seven lakhs have already been expended. The number of stipends has been increased to sixteen in each school. The number of schools has been increased

to 201 (exclusive of three aided schools), and the erection of 100 temporary schools is contemplated. Pupils, inclusive of those in second grade vernacular training schools, number over 3,000. It has been suggested that the pay of the head instructor be raised to Rs. 40 a month. In Eastern Bengal new buildings and hostels have been erected. Expansion has been attempted, not as in Bengal by a large increase in the number of institutions, but by doubling (in most cases) the number of stipends tenable in each of the 39 schools. At the same time the course has been lengthened to two years save in the case of those who have passed the upper primary stage or have had at least two years' experience of active teaching, in which cases the course is for one year only. The insufficiency of the output has only been partially cured, the inefficiency of the staff remains. A scheme has been formulated and has received the sanction of the Secretary of State to staff a number of these schools with officers of the subordinate educational service and to place the vernacular teachers upon a reasonable average salary of Rs. 30, to enlarge each institution so as to hold 40 pupils, to raise the qualification required for the limitation of the course to one year to the middle vernacular certificate, and thus to provide for the simultaneous training of 1,600 students, of whom 500 are to be teachers from upper primary schools, 500 teachers from boards lower primary schools and 600 new candidates. The separate schools which exist in Assam are small institutions managed by government or by mission agencies and intended for the training of teachers belonging to hill races. They are situated at Tura in the Garo hills, Jaiaw (close to Shillong) in the Khasi hills and at Kohima and Impur in the Naga hills. In Bombay towards the end of the quinquennium local normal classes were opened for the instruction of untrained teachers. Each class appears to be attended by seven teachers for a period of six months. The report does not describe the *modus operandi* though it is said that the experiment is in its infancy and no definite opinion as to its success can yet be given. There appear (though the figures seem to conflict with those in the general tables) to be 24 classes of this kind.

(c) *Training in apprentice classes.*

484. The apprentice system consists in the placing of candidates for employ at selected vernacular middle schools where they can pursue their ordinary studies and also obtain a certain amount of instruction in method and practical experience. They are to be found in the United Provinces, the Punjab, the Central Provinces and Assam. Opinions regarding the efficacy of this course differ considerably. Mr. Wright says that in the Central Provinces there is a consensus of opinion that they are useless as a means of obtaining trained teachers. They arose in response to the demand and were a cheap way of making up the deficiency. They are now being abolished. In Assam the system has always been regarded as a dead failure and has been in process of abolition during the quinquennium, the classes attached to the two training schools being intended to take its place. In the United Provinces on the other hand the system has proved so successful that it has been greatly developed in the last few years. In 1907 there were 48 such apprentice classes with 274 pupil teachers in them. In 1912 there were 109 classes with 649 pupils. Each school takes six pupils who receive small stipends of Rs. 3 a month. It is possible that the success of the scheme in this province is due to two features—first, the presence in each selected school of a special instructor trained in a normal school (his pay must be at least Rs. 12 which seems little enough), and secondly, the popularity of middle vernacular education in this province which has enabled the qualification for admission as a pupil teacher to be raised in practice from the upper primary to the middle certificate, all but 27 out of the 649 pupils being possessed of the latter qualification. Mr. de la Fosse looks forward to an extension of this system to facilitate the general extension of elementary education.

(iii) *General characteristics. Courses.*

485. The courses in vernacular training schools differ radically from those in secondary training schools. *First*, the instruction is given in the vernacular—for the teacher will himself instruct a vernacular school. *Secondly*, as the previous education and intelligence of the pupils are altogether on a much lower level, the curriculum is simple. It largely aims at imparting the actual knowledge which will place the teacher on a somewhat higher level than the pupils of the highest class he will ordinarily be expected to teach.

It also concentrates on the very subjects and books he will have to handle. Hence, on its general side, the course in all provinces provides for further instruction in the vernacular language, arithmetic and simple geometry, history, geography, drawing and drill. In several provinces a good deal of attention is paid to black-board work and to simple manual training, and the students of many institutions produce good raised maps and globes, which they take back as a property to their own village-schools. According as the primary school curriculum demands, elementary science, agriculture (or rather nature study), land measurement, the village map, simple accounts, the keeping of land records, elementary hygiene and botany may be added. Some of the Madras schools teach music; schools in Burma teach Sloyd; occasionally an oriental classic is added; and Bengal has permitted English as a subject in its training schools. On the professional side there is the study of a simple work on school-management; still more important, there is the constant presence of the model school, which affords practice and demonstration. A monograph by Lala Tara Chand is added as appendix XXV.

Special subjects.

486. Training in special subjects is hardly a desideratum for the vernacular teacher. There was previously in the Central Provinces an agricultural normal class attached to the agricultural college at Nagpur. It was intended for the teaching of village schoolmasters. It has been abolished, because it is recognised that the teaching of agriculture is beyond the scope of primary schools and that nature study though a suitable subject is something different from agriculture. Instructors in nature study are now attached to four of the normal schools in the Central Provinces, to all the schools in the Punjab and to several in Madras. In 1911 a scheme was approved for training elementary teachers in Eastern Bengal and Assam in the delivery of lessons in nature study. A specially qualified professor was to be attached to the Dacca training college and to instruct the teachers of *guru*-training schools, etc., who would in turn impart what they had learned to the elementary teachers under their charge. It is not reported whether the scheme has taken effect.

Conferences.

487. In some provinces steps are taken by means of conferences, etc., held by inspecting officers while on tour to effect a certain amount of training for untrained teachers or of re-training for those who may be expected to have forgotten the instructions imparted to them. Bombay reports that classes opened with this intention have been closed. The United Provinces' report devotes some space to a description of conferences to which teachers are summoned to centres for such instruction. The opinions upon their efficacy are varied, and it is suggested that the annual lessons upon method constantly delivered by the same officer may pall upon the learners.

(*iv*) *Effects of training.*

488. The efficacy of the training given in these institutions must naturally vary with the qualifications of the instructors and the care which inspecting officers can bestow. Another very pertinent problem is that of ensuring that the trained teacher actually adopts teaching as his profession. In some provinces as already stated agreements are taken, but the most effective manner of avoiding this kind of wastage is the offer of reasonable prospects. In Bombay the revised code of 1910-11 has made trained teachers of the first and second year eligible for a starting salary of Rs. 12 and Rs. 15 respectively, and the maximum pay of a third year man has been put at Rs. 25. The local boards have found difficulty in paying these salaries and the output of third year trained teachers has actually had to be limited in consequence. Similar rules are being introduced elsewhere. Mr. Prothero makes the following interesting remarks on the products of *guru*-training schools in Bengal :—

" There can be no doubt that the standard of teaching in the primary schools has improved by the introduction of trained *gurus*. The weak point of the scheme lies in the fact that a large percentage of the trained *gurus* who pass through the schools do not return to their primary schools to teach, but take up other employment. The money thus spent in their training is lost to government. In 1909-10, 1,325 *gurus* passed out from the schools with certificates of competence, but the number of trained *gurus* actually employed in schools of all classes only increased by 585. It is thus clear that 740 *gurus* in that year sought other employment than teaching. Similarly in 1910-11

and 1911-12, 1,232 and 953 *gurus* respectively obtained certificates of competence, but the increase of trained teachers in actual service amounted to 944 and 521. The result was that during these two years government lost the services of 288 and 432 *gurus* whom it took pains to train." He further remarks that passed *gurus* are said to be employed in some numbers as mukhtars' touts.

IV.—Special measures.

489. The method under which officers of the Indian educational service are permitted to study methods and developments in other countries was described in Mr. Orange's review. Such study is taken during furlough, and advantages are offered for its encouragement. Between 1902 and 1907 eigheen officers had availed themselves of the opportunity thus given. Since then three officers have been placed on such duty. *Furlough studies.*

490. In certain provinces it is now the habit to insist on a certain amount of training in the case of the subordinate inspecting staff. Thus we hear of assistant deputy inspectors undergoing training in certain special classes in Bombay; sub-inspectors are specially trained at the Hare College, Calcutta; and in Eastern Bengal and Assam an examination has been prescribed for inspecting officers in vernacular literature, the art of teaching, discipline and organisation and the departmental rules and orders. The examination appears to have defeated a considerable number of officers. *Training of the inspecting staff.*

491. Teachers' associations have been formed in Madras through the agency of inspecting officers. Their objective is the general improvement of teachers and the special study of the subjects of the curriculum which are comparatively novel, such as drawing, civics and nature study. It is not uncommon to find such associations in connection with training institutions; the Hare College in Calcutta is an instance in point. In Bombay there is a somewhat similar association (not all the members of which are teachers) for the discussion of current educational problems. The Punjab has headmasters' associations, of which the report says :— *Teachers' associations.*

"These associations were started in 1908 in the larger educational centres of the province. Membership is not restricted to headmasters, inspecting officers and others who are interested in education being also included. The objects of the associations are to afford scope for local expressions of opinion on educational questions, and to promote harmonious relations between the authorities of the local secondary schools. They are the inspectors' advisory councils, and they have put forward many useful suggestions which have been adopted subsequently by the department. Many such local conferences have been held throughout the province, and it may be safely asserted that they have done much to promote good feeling between schools and to stimulate interest in educational matters."

Photo.-Mechl. Dept., Thomason College, Roorkee.

THE STAFF AND STUDENTS—SANSKRIT COLLEGE, CALCUTTA.

Photo.-Mechl. Dept., Thomason College, Roorkee.

THE CALCUTTA MADRASSA.

CHAPTER XII.

ORIENTAL STUDIES.

492. From ancient times till after the advent of British rule oriental learning enjoyed the patronage of kings and the nobility—naturally, for some of the classic tongues were the language of the polite, just as Latin long survived as the literary language of Europe. The orientalists of those times employed themselves in the writing of books and of commentaries, critical research in the modern sense was unknown. Early servants of the East India Company preserved the tradition and founded schools of oriental study—witness Warren Hastings' *Madrassa* in Calcutta. Then came the movement among the Bengalis for English education, Lord Macaulay's minute and the despatch of 1854. Public interest and state patronage alike were withdrawn from oriental learning and transferred to places of utilitarian education. The study of the classics in India was left, not wholly, but largely to decay, while it was in Europe that a new school of research arose and in European universities that orientalia began to attract increased interest. The following paragraphs, however, will show how strongly (though often in hidden places) the literary cult has persisted, the efforts of government to organise it and the recently awakened consciousness both of its value and of its defects. *Introductory.*

493. The teaching of oriental languages is carried on in ordinary and in special institutions. First, classics and vernaculars are learned in secondary schools and in colleges. Some classical language—Sanskrit, Arabic, Pali, Persian, Hebrew, Armenian, Avesta or Pahlavi—ordinarily though not always forms a subject of examination at the matriculation and save in the case of science students at subsequent university tests. A vernacular is also insisted upon in the Calcutta University as compulsory in the intermediate and B.A. standards. In the Madras University a vernacular was compulsory in the intermediate until 1910, when the regulation was changed because it was found to discourage the study of Sanskrit. The papers in Sanskrit at the Calcutta B.A. examination are:—(*i*) poetry, texts, including portions of Manu, etc., and translation from English into Sanskrit; (*ii*) drama texts (*viz.*, a selection of two from *Sakuntala*, *Uttararamacharita*, *Mudrarakshasa* and *Ratnavali*) and another translation into Sanskrit; (*iii*) translation into English of prose passages from unprepared Sanskrit books, grammar, and outlines of the history of Sanskrit literature. The honours course prescribes in addition selected portions of *Bhattikavya* and *Kadambari* and another translation into Sanskrit; selected hymns from the Rigveda with Sayana's commentary; and grammar and rhetoric. The B.A. course in Arabic comprises the *Hamasa*, the *Diwan* of Mutanabbi and the *Diwan* of Abu Atahiya; the Koran, the *Maqamat Hariri*, Tabari's history, Qazwini's geography; and grammar. In addition to this, the honours course requires the Seven *Muallaqat*, *Banat Suad*, the *Diwan* of Ibn Faridh; the Koran with the commentaries of Baydhawi and Zamakhshari, Ibn Hisham's Life of the Prophet, the *Muqaddima* of Ibn Khaldun, the *Mukhtasar-ul-Maani*, prosody and rhetoric, the outlines of Muhammadan history to the fall of the Abbasid Caliphate, and a general knowledge of the history of Arabic literature. The knowledge of the classics thus acquired, however, does not carry the respect and estimation commanded by the pupil of the special institution; though it gives some acquaintance with the language, it does not profess to confer any great depth of scholarship; nor, unless aided by further study conducted on other lines, would it naturally fit its recipients for research. *Study of classics in ordinary institutions.*

494. It must not, however, be supposed that the universities make no provision for further study. The courses of instruction for the M.A. in Sanskrit, Arabic, etc., attain a high standard. Moreover, special provision is occasionally made. The Calcutta University has in recent years appointed from time to time readers to deliver lectures on certain branches of study—ancient oriental astronomy, Bengali literature, *Nyaya* and Buddhist Mahaya- *Provision by universities for further study.*

nist philosophy. At Bombay the Wilson philological lecturership and eleven scholarships, including the Springer research scholarship, are endowed for language study. The Madras University has recently instituted title examinations in oriental learning and has adopted a scheme (which has not yet materialised) of lecturerships and post-graduate studentships. There is also the Premchand Roychand research studentship and a fellowship for the study of Sanskrit. The Punjab University has a special oriental faculty, presently to be described, and awards annually Rs. 2,000 for the encouragement of vernacular literature. There are also four scholarships and a grant for the encouragement of the study of Vedic and Yunani medicine. The University of Allahabad has the Sadho Lal readership.

Finding of the conference of orientalists.

495. The conference of orientalists which met at Simla in 1911 considered that Indian universities have not achieved much in this line of study. Their main work has been the framing of courses and the conduct of examinations destined to prepare or to test aspirants after an official or professional career. They have included the classics (not excepting Latin and Greek) in their courses; their constituent colleges contain professors of excellent attainment; but they have done little to extend the field of knowledge. Oriental scholars of note are few in India. Of the best known of those in recent times—Sir Ram Krishna Bhandarkar, Dr. Thibaut, Dr. Venis and the late Raja Rajendra Lal Mittra—the first three indeed have long been closely associated with university and college work; the last, educated at a medical college, appears to have derived his inspiration from his connection with the Asiatic Society of Bengal.

Special institutions.

496. Secondly, there are special institutions. Under this category fall the oriental colleges (figures for which are given in General Table III), certain of the 'other schools' (under head 'school education, special') and those private institutions which are shown as concerned with advanced teaching. Of the first class of these there are 17, with 1,452 pupils; of the third 2,634, with 55,200 pupils; the numbers in the second class are indeterminate. There are likewise the Koran schools, in number 8,288 with 168,406 pupils. These, however, are religious rather than educational, imparting by rote a verbal knowledge of the necessary *suras* of the Koran, without teaching the meaning of the Arabic. "The majority of the pupils are sent there not to learn what is useful, but to fulfil a religious obligation." The institutions mentioned above vary in character and efficiency. But all, or nearly all, have this in common, that the instruction given is along traditional lines, and is imparted by *pandits* and *maulvis* of the orthodox type, who are seldom acquainted with the English language, still less with modern methods of teaching and research. The commonest types are the *tol* and the *maktab*. In the *tol* the *pandit* instructs a few pupils in Sanskrit—*vyakaran* (grammar), *kavya* (poetical literature), *tarka* (logic), *darshan* (philosophy), *jyotish* (astrology) and *aushadha shastra* (medicine). The *pandit* is a Brahman and his office is often hereditary. His pupils are Brahmans and generally live with him and regard him *in loco parentis*. Perhaps it is partly the exclusiveness and hereditary character of these institutions which maintains the level of culture both in pupil and teacher. The scholarship may be of a narrow type and won by laborious means; but it is deep and invaluable to the modern orientalist. The *maktab* is characteristically of a more democratic type. The *maulvi* gathers the Muhammadan children of the village under the shadow of the mosque and teaches them, along with the repetition of the Koran and probably a little Urdu, such store as he possesses of Persian or even of Arabic. Only in the higher institutions can the instruction be described as advanced. And these small Muhammadan schools are (unlike the *tols*) capable of conversion into regular village schools imparting vernacular instruction, not necessarily to the loss of their more special studies.

Sanskrit colleges.

497. Above these are the larger and more important institutions. The *tols* blossom into Sanskrit colleges—in reality magnified *tols*, possessing several teachers instead of one, and a score or two of pupils instead of a mere half-dozen. The subjects and the methods of study remain much the same. Among other careers, those of family priest (*purohit*) and doctor (*baid*) are open to the students. Most of these schools are still purely indigenous in character and have been maintained from former times

as centres of repute Such are the colleges in Nawadwip (Nadia in Bengal) where, however, government maintains certain professors. Others are of modern growth, and are generally attached to arts colleges, though separate from them. Such is the Sanskrit College at Calcutta, whose affiliation was extended from the intermediate to the B.A. during the quinquennium, its professors being likewise utilised as university lecturers for the M.A. in Sanskrit, while at the same time it has an oriental side which prepares students for the examinations held by the Sanskrit Board presently to be described. Such is the Hemanta Kumari Devi College at Rampore-Boalia, which is connected with the Rajshahi College. Such also is the Sanskrit College at Benares, of which the principal is also principal of the Queen's College—an arts institution. There a course of six years leads up to an *acharya* examination. There is also an anglo-Sanskrit department. The Central Hindu College at the same place has a department for Sanskrit studies on indigenous lines. At Pilibhit (United Provinces) there is a large Sanskrit school—the Lalit Hari Pathshala. The Muhammadan Anglo-Oriental College at Aligarh has made special arrangements for the pursuit of Arabic, and, with assistance from government, has secured the services of a German scholar.

498. The Arabic institution which answers to a Sanskrit college is the *madrassa*. This differs materially from the *maktab*, not only in size, but also in efficiency and subject-matter of instruction. *Madrassas* flourish in the United Provinces, where is the Arabic school of Deoband, enjoying an almost Asiatic reputation and drawing many of its pupils (who number in all 600) from beyond the confines of India. In the same province is the Nadwa, the Imam-ul-Madaris, the Syed-ul-Madaris, the Nur-ul-Madaris and the Islamia school at Amroha. In Bengal, the famous Calcutta Madrassa, founded by Warren Hastings, still flourishes; and there are similar *madrassas* at Hooghly and (in Eastern Bengal) at Dacca and Chittagong. These last are government institutions, contain many hundreds of pupils, and generally have an ordinary high school for Muhammadans under the same roof and management. They are partially supported by the Mohsin fund—an endowment made by one Haji Muhammad Mohsin, the pious son of a rich Persian merchant who settled at Hooghly. The dense Muhammadan population of Eastern Bengal maintains other *madrassas* under private management. Sind, another stronghold of Islam, possesses *madrassas*—some under the management of local boards. The course in the *madrassa* includes Arabic and Persian literature, Muhammadan law, logic, rhetoric, philosophy, geometry, *Hadis* (sayings of the Prophet) and *Tafsir* (commentaries on the Koran), etc. The spectacle presented by these *madrassas* is described in the chapter on Muhammadan education (to which reference is also invited on the subject in general). The *maulvis* are men of reverend aspect. The pupil, sometimes of mature age, hears the lesson with almost devout attention. Public charity helps to support the institution, local Muhammadans giving free board and lodging (*jagir*) to the students, who, drawn from neighbouring villages, intend to devote their lives to the sacred calling of a *mulla*, or to some other career, which, if not obviously utilitarian, at least carries respect or veneration. *Madrassas.*

499. In this connection may be mentioned the teaching in some of these schools, both Sanskrit and Arabic, of the Ayurvedic and Yunani systems of medicine. These are still patronised by vast numbers of the people, and are largely practised in Bengal. And in other parts of India the profession appears to flourish. The director of the Punjab says, "The Yunani system of medicine is taught in a class at the Islamia College, Lahore, which is subsidised by the university; and in the Madrassa-i-Tibbiya, Delhi, which has 130 students against 71 five years ago. Modern surgery and the names and properties of common English medicines are said to be taught in the latter institution. Vedic medicine is taught in a class attached to the Dayanand Anglo-Vedic College, Lahore. The number of students has risen from 11 to 44." *Teaching of Ayurvedic and Yunani systems of medicine.*

500. Such are the special schools for oriental studies. There remains to be mentioned the interesting, though somewhat melancholy, experiment which has been made by the Punjab University. This university maintains an oriental college in connection with an oriental faculty. "The oriental col- *Oriental College, Lahore.*

lege," says Mr. Godley, " embodies the intentions of the original promoters of a university scheme for the Punjab, and as such is an interesting survival; it is lacking, however, in vitality and is chiefly kept alive by the aid of scholarships and stipends. The college has three functions. It prepares the students for the various oriental title examinations of the university and also for the oriental degrees of B. O. L. and M. O. L. which were supposed to represent the attainment of European learning through the medium of the vernacular languages; while it also undertakes the instruction of the arts students of the government college in the classical languages of the east. Owing to the failure of the oriental degree courses as formerly constituted to attract candidates, the regulations were changed during the quinquennium so as to make these courses include a knowledge of English, combined with Indian history and oriental languages. The result has not been encouraging, only four students having obtained the degree of B. O. L. during the period and one the degree of M. O. L., and it is fairly evident that the revised courses are hybrids which do not at present appeal to students of either the old or the new type. The number of students in the title classes on the other hand has shown a marked increase, especially in the case of Sanskrit, where the number rose from 36 to 66, the Arabic class also increasing from 18 to 24. The instruction given to the government college classes is not considered to be satisfactory, owing to the teachers employed in the oriental college being unacquainted with western methods of study. A reorganisation of the oriental college with a view to securing the services of a staff uniting the virtues of old-fashioned erudition with those of modern scholarship is engaging the attention of the university. Such a staff would, it is thought, be able to undertake the advanced teaching of oriental languages in the adjacent arts colleges, without neglecting the interests of the *maulvis* and *pandits* of the old school."

Defects of the present system.

501. Thus classical study in India takes two forms. It is pursued in the universities as a part of the ordinary arts curriculum. The teachers are men of erudition. The student is conscientious. But, so far as learning in the wider sense is concerned, he is beset by two difficulties. First as pointed out by Dr. Venis, " his daily round of lectures may present him with a play out of Shakespeare and a dish-up of Aristotle or Kant or some period of modern European history and, finally, the Sakuntala and the Kirata. His Sanskrit thus links on to nothing in the prescribed 'course' and can find no mental context for itself." Second, before he has formed the habits of the true student, he is hurled into the work of life and into a society that recks little of the quiet and steady pursuit of literature. When the stress of a professional career is over and it is time to see about the sacrifices, his knowledge and his energy have departed. Again, here and there in the villages or in some quiet corner of the town, the old system persists. Here, to quote again from Dr. Venis, " the scholar must not only understand his texts, but he must carry them about in his head, the *ipsissima verba*, and so too the traditional interpretations and the many other things, which he learns from his *guru* and which still find no place in dictionary or modern work of reference." Looked at from the numerical standpoint, both systems continue to attract. Of university students in British India, 19,251 are studying some classical language against 11,729 five years ago. In advanced private institutions there are 55,250 pupils against 50,792. And the numbers in some of the public *madrassas* have greatly increased. But in the one system the study is patchy and soon forgotten, as the English business man forgets the Greek and Latin he learned at school. In the other it is steady and deep, but lacks the breadth and strength of current to carry it into the channels of a newer culture.

Attempts at improvement.

502. Further, it has long been realised that the traditional *pandit*-lore, rich as it is in possibilities, lacks organisation and guidance, that there is consequent waste of effort, and that many a scholar and his work are born to waste their sweetness in obscurity. The experiment in the Punjab University is partly an attempt to remedy this defect. For the *madrassas* under government control principals have been selected who are not only oriental scholars, but also men of general erudition. Grants are likewise given to some of the indigenous *tols*, colleges and *madrassas*. In Madras, Sir A. Bourne referred

the question of oriental studies to a committee, with a view to removing the reproach that that Presidency is behind other provinces in the matter of Sanskrit studies. Its report is under consideration. There are four other ways in which attempt has been made to systematise and vivify the latent power which undoubtedly exists in the country. These deserve special mention.

503. (*i*) *Examinations and titles.*—The Viceroy confers the titles of Mahamahopadhyaya and Shams-ul-ulama (which may be translated as "Most mighty teacher" and "Sun among the learned") upon distinguished scholars in the oriental classics. These titles were created in 1887 to commemorate the Jubilee of Her Majesty Queen Victoria's accession. (*i*) *examinations and titles.*

Other bodies are also permitted to hold examinations on the results of which distinctive titles and stipends are awarded. In Bengal the past five years have witnessed a remarkable development under the Board of Sanskrit Examinations; and the history of this movement is noticeable as indicative of the response which follows attempts at organisation and the renewed interest which Sanskrit studies have recently evolved. In 1878, at the suggestion of the late Mahamahopadhyaya Mahesh Chandra Nyayaratna, the Government of Bengal introduced the system of title examinations. Thereupon there sprang into existence a number of Sanskrit associations (*sabha* or *samaj*). These arose at Bankipore (1878), at Dacca (1878), at Nawadwip (1885), at Bhatpara (1890) and elsewhere.*

These associations were recognised for the presentation of candidates and at first selected the text-books, appointed the examiners and controlled the examinations. The system, however, afterwards came to be organised and centralised under the principal of the Sanskrit College, Calcutta. In 1908, the Government of Bengal constituted the Board of Sanskrit Examinations for the conduct of the examination, the affiliation of *tols* and the award of stipends and scholarships. The examinations are of two kinds—first, those on the results of which stipends and grants are awarded (these stipends are paid by government and aggregate Rs. 24,000 a year); second, the title examinations, success in which earns the titles *Kavyatirtha*, *Smrititirtha*, etc., and likewise prizes, towards which (and towards the general expenses) government contributes Rs. 2,500 annually, while others are offered by the large landed proprietors, etc., who are interested in Sanskrit studies. In 1907 the number of examinees was 4,274; in 1912 it was 7,553. The report of the Board from which these statements are taken gives some striking figures showing that numerous *tols* have been started in districts which had long been strangers to such education. In Bengal and Eastern Bengal and Assam the Board now deals with 1,300 *tols*.

There is similarly a Central Board of Examiners, Bengal Madrassas. Eleven *madrassas* in Bengal are permitted to present candidates. The course for the highest examination includes, among other text-books, parts of the *Saba-i-Muallaqah* and the *Maqamat-i-Hariri*, specified chapters of the *Hidayah*, the *Musallam-us-Subut*, etc.

In the United Provinces the examinations held by the Sanskrit College, Benares, were transformed into public examinations in 1908. These have proved highly successful and now attract some 2,000 candidates a year from various parts of India. Tests called the *Fazil* and *Mulla* examinations are held for Arabic and Persian students of institutions of the old type. The paucity of candidates here, in contrast to the number in Bengal, indicates stagnation of these studies and a small demand for such qualifications. Assam has its own system of examinations on the result of which rewards are given by way of grant to the teachers and by way of scholarship to the successful pupils.

In Burma the *Patamabyan* examinations test monks and others who study Pali on the ancient lines. The examination has a pre-British origin, and was held in Mandalay, at the Kyauk-taw-gyi Pagoda. "At its eastern portals there still stand, but on the verge of desolation, the noble halls, carved in teak and overlaid with gold, in which the annual Patamabyan, or examina-

* The Origin and Growth of the Board of Sanskrit Examinations, Calcutta, issued from the office of the Board, 1912.

tion of monks and novices in theological learning, was held. Here King Thibaw took that degree which first brought him into notice; and here, during many years, the pious monarch fostered the labours of the candidates."* Now the examination is held at other centres also. There are four standards, in all of which written papers are set, and in three of which learned divines hold an oral test. A committee controls the examination. The government gives money rewards for passing in these tests, or, where a successful candidate is forbidden by his habit of life to take money, presents of robes, books, etc.

Besides these, there are examinations held at other places and by various bodies. And, quite recently, the Madras University has adopted regulations instituting examinations and the bestowal of titles for oriental studies pursued for four years after the passing of the matriculation. "The original intention in framing these regulations was that the proposed titles should encourage the study of oriental languages and literature on indigenous lines, but the view was successfully advanced that the university should seek to introduce among *pandits* and *maulvis* the more critical methods of European orientalists." The examination will first be held in 1915.

(ii) inspection.

504. *(ii) Inspection.*—In some provinces there are specially qualified inspectors who visit the indigenous schools and give advice and aid. This is the case in Madras and in Bengal, and during the period has become so in the United Provinces. In Eastern Bengal a few inspectors of Arabic and Persian-teaching schools were experimentally appointed during the quinquennium.

(iii) scholarships.

505. *(iii) Scholarships.*—The universities and the Local Governments encourage successful study by scholarships and stipends. The Government of India likewise award two scholarships a year, each of the annual value of £150, for two years' oriental study in Europe—that is to say, there are always four scholars working in England or some other European country; and of these scholars three are studying Sanskrit and one is studying Arabic. The intention of the scholarships is to enable the holders "to acquire the critical and scientific methods of western scholarship by studying the classics under European professors and by acquiring a knowledge of French and German." The Sadho Lal scholarship endowment trust was described at length in the last review; it was founded for the study of Sanskrit at the Sanskrit College, Benares, and was to be held by Brahmans who are graduates or Sanskrit title-holders. There are other endowed scholarships of a like nature. Archæology and epigraphy may justly be included in the connotation of orientalia. In 1903, the Government of India sanctioned three scholarships for study under the archæological department. Just after the close of the quinquennium, the number was raised to four, of which three are to be held by Sanskrit scholars, and one by a Persian or Arabic scholar. The scholarships are of the value of Rs. 75 a month and are tenable for one year, but may be extended for a further two years, the amount being then raised to Rs. 100 a month. The intention is the employment of Indians in the archæological department. The Government of Burma has instituted a similar scholarship of Rs. 100 a month, rising to Rs. 125 in the second and third years, should extension be granted.

(iv) grant-in-aid.

506. *(iv) Grant-in-aid.*—It is impossible, owing to difficulties of classification, to state the amount given as aid to oriental institutions. But, in addition to the special scholarships already mentioned, indigenous institutions are encouraged by grants which frequently take the form of stipends for teachers and scholarships for pupils awarded on the strength of examinations. In some provinces, *e.g.*, the United Provinces and the Punjab, grants are given under rule to indigenous schools of various kinds, including oriental schools. In the Bengals, not only are fixed grants given to certain well-known institutions (such as the colleges at Nawadwip and Bhatpara, the Kabindra College at Goila in Bakarganj and the Jagatpur Asram in Chittagong, the last peculiar for the number and success of its female students), but stipends and scholarships are also distributed. In the Bengals, fifty stipends of Rs. 6 and Rs. 8 a month, and thirty-four stipends of Rs. 10 and Rs. 12 a month,

* V. C. Scott O'Connor, Mandalay, page 58.

are awarded, on the result of the first and second examinations respectively of the Board of Sanskrit examinations, to the teachers of successful pupils; while sixty scholarships of Rs. 2 a month, and thirty-nine scholarships of Rs. 3 and Rs. 4 a month are distributed to the pupils themselves who distinguish themselves at those examinations. The system has not been extended to Assam, because the system in Assam *tols*, where a pupil is instructed in various branches of learning at the same time, differs from that prevalent in Bengal, where the pupil specialises to a high standard in a single branch. But government holds examinations adapted to local conditions, on the results of which fifteen stipends of Rs. 6 to Rs. 8 a month and seven stipends of Rs. 10 to Rs. 15 a month are given to teachers of *tols*, and fifteen scholarships of Rs. 3 a month to pupils. Similarly successful teachers in the *madrassas* of Assam receive eight stipends of Rs. 7 to Rs. 10 a month, and nine scholarships of Rs. 3 a month are awarded to pupils. These particulars are given as illustration of a form of aid found suitable for institutions where perhaps examination alone can furnish the test of efficiency. Aid is also given to *maktabs*, as described in the chapter on Muhammadan education; but for their secular rather than their oriental teaching.

Conference of orientalists, 1911.

507. These efforts notwithstanding, there has recently arisen a spirit of dissatisfaction in regard to the study of oriental languages in India. It has taken two apparently antagonistic forms. One is a feeling of disgust at the inutility of a type of knowledge which is regarded as outworn, which leads to no useful career and the very opportunities for whose acquisition tend to divert students who might otherwise qualify themselves to be benefactors of their community. This feeling has manifested itself among Muhammadans in certain parts of the country and indicates the rapid permeation of new ideas. The admixture of useful secular subjects is advocated. The other is a feeling that India has lagged behind in the study of her own or her adopted classics and that this reproach must be removed by new efforts; that the idea of education is too narrowly utilitarian and that those also serve who seek, not riches, honour or power, but knowledge for its own sake. In fact, there has been a quiet but effective re-awakening to the advantages and the needs of classical study. In July 1911, Sir Harcourt Butler summoned at Simla a conference of orientalists, which was attended by distinguished scholars from every part of India. At this conference the distinction was emphasised between the modern college-bred scholar with his broader views, and the *pandit* and *maulvi*, nurtured in the old methods and possessed of deep knowledge. Dr. (now Sir R.) Bhandarkar urged the retention of the *pandit*, as possessing a depth of knowledge which is lacking in the modern scholar; and as capable of giving substantial help. At the same time he considered there had been deterioration and that some improvement should be wrought. The general opinion was that, whatever reforms may be introduced, the old-type *pandit* and *maulvi* should be made, in their way, as efficient as possible before general knowledge or the teaching of English was superimposed; in exceptional cases, and after they had fully acquired the traditional learning, their outlook might be broadened by wider knowledge, by the study of modern languages and by critical research; but, even for these few, English should not be encouraged at too early a stage. The addition of epigraphy, numismatics, etc., as voluntary subjects, was recommended. The preservation of the ancient learning (which is vital) and its development might be encouraged by enhanced government aid, an extension of the systems of special inspectors and scholarships, the raising of the salaries of oriental teachers, and the granting of certificates and titles. But the conference went much further. It advocated, for the cultivation of the classics and the production of original scholars, the establishment of an oriental research institute somewhat on the lines of the Ecole d'Extrême Orient at Hanoi or the Oriental Institute at Vladivostock. This, combined with local schools, would form an attractive meeting place for European and Indian scholars, promote an intellectual atmosphere, concentrate effort, offer a welcome environment to those trained in the traditional school, imbue the elect among them with the spirit of critical research and exercise an inspiring influence generally upon the study of orientalia throughout India. The foundation of such an institution has been approved in principle.

Other measures and institutions for oriental studies.

508. No account of oriental studies in India would be complete without some brief mention of the preservation of manuscripts and ancient buildings, societies and publications.

(*i*) *Preservation of manuscripts.*

509. (*i*) *Manuscripts.*—Madras possesses a good library of manuscripts. The staff in charge of it has recently been reorganised by government; and Rao Bahadur Rangachariar is making a catalogue. The library is doing useful work. Dr. Otto Schrader is in charge of the Theosophical Society's library at Adyar and is issuing catalogues. In Bombay Presidency, the Deccan College has 10,000 catalogued manuscripts. Bengal is rich in libraries. Government has collected about 10,000 under the superintendence of Mahamahopadhyaya Hara Prasad Shastri and others; these are being catalogued. The Sanskrit College possesses a catalogued library. The Asiatic Society of Bengal receives a grant from government for the collection of manuscripts. The work is conducted by Dr. Ross, who is also cataloguing the famous library of Arabic manuscripts at Bankipore. Another Arabic library, also catalogued, is at the Calcutta Madrassa; there is an interesting collection (containing a number of Tibetan works) at Bishop's College and another at the Serampore Theological College. The Government Sanskrit College at Benares has a fine collection of over 5,000 Sanskrit manuscripts. The Government of Burma possesses a considerable collection of manuscripts (mainly in Pali and Burmese) which is being catalogued by M. Duroiselle; lists of manuscripts in monasteries and private houses are also being made with a view to future purchase. Much therefore is being done. Government have on an average spent about Rs. 17,000 a year on the collection and preservation of manuscripts, and part of the subventions made to societies (presently to be mentioned) are doubtless spent on this object. But much more remains to do. There are many fine libraries—some of them in native states —which have not yet been catalogued (an instance to the contrary is the Sanskrit library at Jammu, catalogued by Sir Aurel Stein). Further, there is little doubt that, could adequate search be made, great numbers of valuable manuscripts would be found scattered about the country. The compilation of *catalogues raisonnés* and the steady collection of manuscripts would be one of the functions of the oriental research institute.

(*ii*) *Preservation of ancient buildings.*

510. (*ii*) *Archæology.*—It is impossible here to do more than merely mention a subject for the pursuit of which a separate department has been created and has accomplished a great work in excavation and preservation. Allusion has already been made to the archæological scholarships given by government. The proposed institute would probably be utilised for training and research in archæology, epigraphy and numismatics.

(*iii*) *Societies.*

511. (*iii*) *Societies.*—The Bombay branch of the Royal Asiatic Society (which also has an auxiliary at Madras) and the Bengal Asiatic Society are the most important. Government aids the second of these institutions with annual grants amounting to Rs. 23,200 for various objects and with special grants on particular occasions. Within the last few years an Indian Research Society has sprung into being in Calcutta. Other societies of importance are the Punjab Historical Society and the Burma Research Society. There are also local societies, the *sabhas* and *samajas* which specially exist for the cultivation of Sanskrit, and the Muhammadan *anjumans*.

(*ii*)

(*iii*)
ship

(*iv*)
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(*iv*) *Publications.*

512. (*iv*) *Publications.*—The *Epigraphia Indica*, the *Epigraphia Indo-Moslemica* and the annual report of the Archæological Survey are issued at the expense of government. Other journals are the *Indian Antiquary* (published in London), *Indian Thought* (published at Allahabad), the journal of the Punjab Historical Society and that of the Burma Research Society, the journals of the Bombay branch of the Royal Asiatic Society and those of the Bengal Asiatic Society, together with the *Bibliotheca Indica* published by the latter. Recently, too, there has been some noticeable activity in the republishing of texts, etc., by certain private societies.

Photo.-Mechl. Dept., Thomason College, Roorkee.

QUEEN MARY COLLEGE, LAHORE.

Photo.-Mechl. Dept., Thomason College, Roorkee.

A GEOGRAPHY LESSON.

Photo.-Mechl. Dept., Thomason College, Roorkee.

A NATURE LESSON.

Photo.-Mechl. Dept., Thomason College, Roorkee.

KHASI GIRLS AT SCHOOL.

CHAPTER XIII.

EDUCATION OF GIRLS.

I.—General.

513. It is customary to commence any dissertation on the education of Indian girls and women by a recital of its difficulties. There is no reason for departing from this practice; for the topic, if monotonous, is the key-note to the whole subject. The following remarks, quoted by Mr. Orange, still largely hold good :— *Obstacles to girls' education.*

"All efforts to promote female education have hitherto encountered peculiar difficulties. These difficulties arise chiefly from the customs of the people themselves. The material considerations, which have formed a contributing factor in the spread of boys' schools, are inoperative in the case of girls. The natural and laudable desire for education as an end in itself, which is evinced by the upper and middle classes as regards their sons, is no match for the conservative instincts of the Muhammadans, the system of early marriage among the Hindus, and the rigid seclusion of women which is a characteristic of both. These causes prevent any but the most elementary education from being given to girls. The lack of trained female teachers and the alleged unsuitability of the curriculum, which is asserted to have been framed more with a view to the requirements of boys than those of girls, form subsidiary reasons or excuses against more rapid progress. To these difficulties may be added the belief, perhaps more widely felt than expressed, that the general education of women means a social revolution, the extent of which cannot be foreseen. 'Indian gentlemen,' it has been well said, 'may thoroughly allow that when the process has been completed, the nation will rise in intelligence, in character and in all the graces of life. But they are none the less apprehensive that while the process of education is going on, while the lessons of emancipation are being learnt and stability has not yet been reached, while, in short, society is slowly struggling to adjust itself to the new conditions, the period of transition will be marked by the loosening of social ties, the upheaval of customary ways, and by prolonged and severe domestic embarrassment.' There is, it is true, an advanced section of the community that is entirely out of sympathy with this view. In abandoning child-marriage they have got rid of the chief obstacle to female education; and it is among them, consequently, that female education has made proportionately the greatest progress in quantity and still more in quality. But outside this small and well-marked class, the demand for female education is much less active and spontaneous. . . . In fact, the people at large encourage or tolerate the education of their girls only up to an age and up to a standard at which it can do little good, or according to their point of view, little harm."

514. Opinions are varied as to the amount of progress made during the quinquennium. The report from Bombay is somewhat pessimistic. "If the quinquennium under review has been a period of slow progress in the education of girls, the slowness has been more marked than the progress. I do not regard the fact that a few more women annually sit for the B.A. degree as indicating anything more than that among the upper and educated classes degree attempting is becoming fashionable and that the daughters of a few professional men are taking to professions (medicine, teaching, etc.), while the great mass of Indian womanhood remains almost untouched and apparently almost inaccessible." "It will thus be seen," Mr. Prior concludes, "that the whole question of Indian female education in this presidency is unsatisfactory and the obstacles in the path of its progress are well-nigh insuperable." The inspectress in the United Provinces, where the proportion of girls under instruction is much smaller than in other provinces, writes :— *Progress.* (*a*) *Opinions.*

"It is difficult to say whether there is any real change in the general feeling as regards girls' education during the quinquennium, but I think one may conclude at least that apathy is taking the place of antagonism with many and that among a small minority its need is accepted. Amongst the best families of a big city such as Lucknow there is a growing demand for some further means of educating the girls, an ordinary school being felt as unsuitable, and this because otherwise marriage prospects decrease. In all the special communities again, female education is part of the programme, whether of the Arya Samaj or the orthodox Hindus; even the Muhammadans, if sufficiently advanced, make it such. Of a less noticeable character is the interest of various private individuals shown in their genuine care for the small schools under their manage-

ment which are to be found every here and there. I cannot compare their number with that of the previous quinquennium, but my general impression is that it is growing. Finally the difficulty in establishing a school is not to fill it with children, but to supply the staff; given a good teacher the children will come and the parents will not object. Nevertheless the returns for the quinquennium show that in female education it is still a case of here a little and there a little, line upon line and precept on precept. There is no general impulse towards it as yet."

Mr. de la Fosse, discussing the difficulties that underlie the problem, includes among them the strangeness and repugnancy to oriental thought of single women earning their livelihood apart from their families, and dives far deeper into ultimate causes when he quotes the prejudices that exist—the ideas for instance that the educated woman is likely to be childless and that her husband is likely to die young. The report however adds that a change, however slow and gradual, is taking place; and that there is no need to despise the day of small things. Sir A. Bourne perceives symptoms in Madras of an advance in public opinion, though the leaders of Indian thought have not so far done much in the way of giving practical effect to their views. Mr. Godley also notes a very marked development of interest as betokened by an unexampled increase in attendance at girls' schools. "The progress recorded during the quinquennium indicates the beginning of a transformation of the popular attitude towards the education of women, a change which is particularly noticeable in the case of the upper and professional classes. The increase of school attendance, the prolongation of school life, the readiness to provide funds to start girls' schools, all denote that stagnation is being replaced by activity; and great development may be looked for in succeeding years." Again, the report from Eastern Bengal and Assam says :—

"The *purda*, the system of child-marriage, and the general indifference of parents to the education of their daughters still act as checks to progress, but that there has of recent years been a marked change in the attitude of both Hindus and Muhammadans to this question there can be no doubt. Parents are gradually awakening to the fact that the education of their daughters is as much a part of their duty as the education of their sons. They have realised, though dimly, that education need not make their girls more independent of their lawful guardians or less observant of established customs and domestic duties. And they have found by practical experience that, with the progress of boys' education, 'the selection of a bride now-a-days depends no less upon her ability to read and write with tolerable ease, than upon her health and general appearance.' Sentimental and material causes have, therefore, combined to dissipate the prejudices which have so long prevented them from sending their girls to school. Indeed so great has the improvement been in this respect, that the absence of an adequate supply of women teachers and the want of funds are now more potent obstacles to the advancement of education than the social customs and prejudices of the people."

(*b*) *Numbers.*

515. Thus much for opinions. Turning to hard facts, we see that, in the past five years, the number of girls' schools (public and private, for Europeans and Indians) has increased from 12,440 to 16,073. Among these, public institutions have risen in number from 10,681 to 14,113. All provinces share in the increase of 3,633 schools (see supplemental table 161); Eastern Bengal and Assam accounts for 2,100 schools out of the total increase, and now shows 5,240 schools—more than any other province. During the decade 1892 to 1902 the number of girl pupils (both in girls' and in boys' schools) rose from 339,031 to 444,470. In the next decade it more than doubled, rising to 645,028 in 1907, and to 952,911 in 1912 (see supplemental table 163). (These figures are for European and Indian girls. The former number only 16,210. Their inclusion does not affect the general accuracy of figures for Indian girls, save in higher institutions where discrimination will be made.) The increase during the quinquennium has been by 47·7 per cent. Perhaps the opinions quoted above are coloured by the figures. The increases in Madras and the United Provinces were equivalent to 37·6 and 35·4 per cent. respectively, in the Punjab to 44·6 per cent., in Eastern Bengal and Assam to 93·8 per cent. Coorg has also increased its pupils by 73·1 per cent. during the quinquennium. Madras and Bengal still lead with 226,685 and 194,114 pupils respectively.

The statement below shows for each province the number of girls under instruction both in boys' and in girls' schools, the percentages of these to the girl population of school-going age in 1907 and in 1912, and the percentage of increase in numbers.

Province.	1907.		1912.		Percentage of increase in numbers at school.
	Number of girls at school.	Percentage of girls at school to girl population of school-going age.	Number of girls at school.	Percentage of girls at school to girl population of school-going age.	
Madras	164,706	5·7	226,685	7·2	37·6
Bombay	108,716	5·9	153,090	7·8	40 8
Bengal	127,800	3·1	194,114	4·6	51·9
United Provinces	40,111	1·2	54,329	1·2	35·4
Punjab	37,283	2·65	53,909	4·0	44·6
Burma	62,794	8·14	79,416	8·9	26·4
Eastern Bengal and Assam . .	79,360	3·5	153,766	6·1	93·8
Central Provinces and Berar .	19,634	1·9	30,847	2·6	57·1
Coorg	1,118	5·2	1,935	10·4	73·1
North-West Frontier Province . .	3,506	2·29	4,820	3·0	37·5
TOTAL .	645,028	3·6	952,911	5·1	47·7

The increases in number are in some cases concealed in the percentage column by the fact that the population for 1912 is taken on the census of the preceding year. With the exception of the small province of Coorg, Burma holds the highest percentage, owing to the absence of the *purda* system. But the number of girls in that province has not advanced *pari passu* with the population and the place of pre-eminence is no longer secure. Madras, Bombay and Eastern Bengal and Assam have drawn close behind.

516. As regards race and creed, the figures are compared below.

—	Europeans and Anglo-Indians.	Indian Christians.	Hindus.		Muhammadans.	Buddhists.	Parsis.	Others.	Total.
			Brahmans.	Non-Brahmans.					
1907	14,448	62,284	86,694	297,425	121,699	51,745	6,170	4,563	645,028
1912	16,210	72,941	120,812	441,267	213,247	66,154	6,528	15,752	952,911
Percentage to the total at school.	1·7	7·7	12·7	46·3	22·4	6·9	·7	1·6	100
Percentage of increase .	12·2	17·1	19·2	48·7	75·2	27·8	5·8	245·2	47·7
Percentage of those at school to population of school-going age in each community.	100	26·6	16·7	2·9	4·5	8·1	88·9	2·2	5·1

The most remarkable feature among the increases is that of Muhammadans.

(c) *Standards.*

517. The general figures of increase indicate a substantial advance. But it is necessary to consider standard as well as numbers. Here Europeans must be excluded. There are now 66 high schools for Indian girls, with 9,045

pupils against 43 schools and 4,945 pupils in 1907; 112 English middle schools, with 11,013 pupils against 113 schools with 10,510 pupils in 1907; and 168 vernacular middle schools, with 15,734 pupils against 262 with 26,663 pupils in 1907. High education thus shows a considerable advance, English middle education is stationary, and vernacular middle education has receded. The main cause for this apparently unsatisfactory result is the reclassification of institutions (already alluded to) in Madras, a number of lower secondary being now classed as elementary or higher elementary schools. "The lowering," says Sir A. Bourne, "is of course only apparent. The great majority of old lower secondary schools still exist as elementary and very many of them as higher elementary. The difference is that they now have in view the definite aim of fitting the girls for life and have the advantage of an elastic curriculum which can be made to suit all varieties of racial and local circumstances." This has resulted in a fall in the Madras presidency of English middle schools by 6 and of their pupils by 692, and the complete disappearance of all vernacular middle schools, which previously numbered 157 with 18,939 pupils. In the latter case, this more than accounts for the apparent loss of 94 schools and 10,929 pupils. In the former, the diminution is counterbalanced by increases from 717 to 2,784 pupils in Bengal, from 65 to 1,577 pupils in the United Provinces, from 1,331 to 3,655 pupils in the Punjab, and from 2,884 to 4,324 pupils in Burma.

518. Judged by the more correct criterion of pupils in different stages, the increase in English pupils has been substantial, and that in upper vernacular pupils phenomenal. Pupils in the high stage have risen from 1,208 to 1,812, in the English middle stage from 4,332 to 7,773, and in both together from 5,540 to 9,585. Those in the vernacular middle stage have declined from 3,039 to 1,602, owing to the total disappearance of pupils of this standard in Madras. (There is also a very small decline in the Central Provinces.) But pupils in the upper primary stage have risen from 32,578 to 43,941, while the increase in the lower primary stage has been from 519,104 to 778,076 (see supplemental tables 175 and 176). The percentages of increase and decline in different stages are:—high +50, English middle +79·4, vernacular middle −47·3, upper primary +34·9, lower primary +49·9.

(*d*) *Literacy.*

519. Sufficient has already been said regarding literacy in chapter VIII. It was there shown that the percentage of literate females per mille has risen from 7 to 10. Absurd as the figure may appear from the European standpoint, it is only fair to add that the increase, however minute, yet indicates what may prove the beginnings of a large advance. The growth of literacy up to the age of 10 has been, owing to the enhanced stringency of the test, stationary among males. Among girls there has been an advance more than sufficient to counterbalance the effect of the new definition. The increase of 70 per cent. between the ages of 10 and 15 compared with that of 50 per cent. between the ages of 15 and 20 gives promise for the next decade. The census reports realised and reflected the greater interest which is being manifested in the education of girls. The literacy figures depend not only on the numbers at school, but on the length of school life—often deplorably short. The following is quoted in the Madras report:—

> "The tendency for girls to remain longer in school is shown in the fact that higher standards have been opened in several schools. Children of wealthy parents attend mainly on account of the desire to obtain greater knowledge of English which is a valuable asset in view of the prospective bridegroom and poorer girls are attracted by the scholarships offered. Some girls return to school after marriage in order to supplement the meagre knowledge already received and the increasing number of individual cases in which the desire to continue the school life is expressed together with the regret that custom or adverse circumstance prevents the continuance show that the general feeling has advanced in favour of attendance in the higher standards."

On the other hand Mr. de la Fosse says, "Madras is not the United Provinces, and in Madras girls are not removed from boys' schools at the age of eight. Here it is the almost invariable rule. It requires a rather sanguine temperament to expect that at that age girls can carry away from school impressions 'that will never fade into nothingness.'"

(*e*) *Expenditure.*

520. Expenditure on institutions for girls has risen from Rs. 44,34,294 to Rs. 60,75,045. The total amount is small. But it is to be remembered that

half the girls under instruction are taught in boys' schools, the expenditure on which is not shown here. The expenditure from public funds upon schools for Indian girls is Rs. 21,04,149; that on European girls' schools is Rs. 5,06,484. The average cost of educating an Indian girl is Rs. 4·6 per annum, and the cost to public funds is Rs. 2·5. The cost in a secondary school is Rs. 24·4 contrasting with Rs. 20·8 in the case of a boy reading in a boys' school. In primary schools it is Rs. 3·4 contrasting with Rs. 4·2 in the case of a boy. The higher rate in a secondary school is indicative of paucity of pupils and expense of staff; the lower rate in a primary school points to the massing of the children in the lower grades promotion from which to advanced grades demanding more expensive instruction is checked by the necessity for early abandonment of studies.

521. The advance made is thus comparatively large. But the total figures are still minute. The percentage of pupils to the girl population of a school-going age is 5·1. The literate among females number 1·1 in a hundred. The direct expenditure on girls' education is Rs. 60,75,045—being but one-ninth of the total amount directly spent on education in India. Not only do the general figures clearly indicate deep-seated indifference or antipathy; but here and there a contrast brings out still more forcibly the causes of comparative stagnation. In Burma, where there is no caste-system, the percentage of female literacy is 6·1. In the United Provinces, the female Hindu population is 19,172,597, the Muhammadan 3,192,086, and the Indian Christian 77,131. In the same province the figures for girls in anglo-vernacular secondary schools are—Hindus 404, Muhammadans 138, and Indian Christians 2,668. *Results.*

II.—Institutions.

522. The public institutions for girls (Europeans and Indians) are classified as follows:— *Number of public institutions.*

	Colleges.	High schools.	Middle English schools.	Middle vernacular schools.	Primary schools.	Total.
Institutions . .	12	135	193	168	12,886	13,394
Pupils . . .	173	15,269	15,033	13,804	446,225	490,504

The number of girls here shown is not the total under instruction, but those in schools specially established for girls. There are also 77,259 girls in private schools. In addition to the number of girls shown in the table there are 25,315 boys reading in girls' schools.

Of the total of 13,394 public institutions, 607 are managed by government, 1,763 by local bodies, 277 by native states, 9,386 are aided and 1,361 are unaided institutions. The systems prevalent in each province will be noticed under primary schools.

523. The number of colleges specially intended for Indian women is 6 and their students are 124. But in some provinces women study in men's colleges. The total of women under collegiate instruction is 369. To maintain special colleges for very small numbers of women is uneconomic. Their relegation to men's colleges involves a risk of subjecting them to inconvenience and depriving some would-be students of the opportunity of instruction. The Calcutta and Madras universities surmount the difficulty by not requiring attendance at lectures in the case of women. The senate of the Allahabad and the Punjab universities can admit them as special candidates to examinations without attendance at college. Bombay alone insists upon attendance as in the case of men. The only institution in *Madras* specially intended for women is the Sarah Tucker College at Palamcottah; but a mission institution at Royapuram teaches to the intermediate; and suitable arrangements have been made in several men's colleges. There are now 46 girls reading in arts colleges. In *Bombay* women study in men's colleges to the number of 76; there are no special colleges for them. *Bengal* has three colleges—the Bethune, the Diocesan and the Loreto House. The first is a government institution; the other two are managed by missions. The Bethune College is affiliated to the B.A. in arts subjects. The number of students is 40, of whom 31 are Brahmos, eight are Indian Christians and one is a Muhammadan. The annual cost is Rs. 24,589, of which over Rs. 22,000 is defrayed by government. The *Colleges.*

Diocesan College is also affiliated to the B.A. in arts subjects, and (with the exception of a *pandit*) is staffed with well qualified ladies. It has 29 students —two Europeans, 19 Indian Christians, five Brahmans, and three Jewesses. The college department of the Loreto House school consists of intermediate classes and contains seven Europeans and three Indian Christians. The *United Provinces* has an excellent institution in the Isabella Thoburn College at Lucknow, which contains 30 arts pupils and 13 in the normal classes. Large additions have been made to its buildings. " The success of the college in university examinations," says Mr. de la Fosse, " is well known and its reputation has been well sustained by this year's results: 3 passes out of 5 candidates for the B.A., 5 out of 9 for the intermediate and 4 out of 4 in the matriculation. Hitherto the college has taught arts subjects only, but it has now been affiliated up to the intermediate standard in biology. Preparation for public examinations by no means absorbs the energies of the staff and students, for the majority of the latter will probably never need to face the ordeal and can pursue undisturbed by its attendant anxieties the even tenor of their studies. The most valuable part of the work is the vigorous social and intellectual life prevailing. Weekly lectures are given on literary, scientific, and historical subjects, and once a month a form of extension lectures in Urdu with lantern-slides is provided for *zenana* ladies of Lucknow. The staff has been greatly strengthened by the addition of several trained American teachers and there are now also two American trained Indian teachers. The material expansion of the college has placed a severe strain upon the energies of the authorities, but its completion will leave them free to take advantage of their improved conditions to raise the college to greater heights of usefulness." The Queen Mary College at *Lahore* is rather a superior school for the upper classes than a college of the usual type. It has now been housed in a new and handsome building. Other provinces have no special colleges; but scholarships are occasionally offered for study elsewhere. Thus, in Eastern Bengal and Assam six junior and six senior scholarships are reserved for girls.

Secondary schools.

524. Secondary schools (exclusive of vernacular middle schools) for Indian girls number 178 with 20,058 pupils. With the pupils studying in boys' schools, the number comes to 22,962. (Supplemental table 172 shows the division between high and middle schools.) Of the 135 high schools for girls noticed above, 66 are for Indians, 69 for the domiciled community. The great majority of the institutions are of the aided type. Mr. Orange remarked that the chief purpose of girls' schools is to impart primary education. As already shown, the numbers in the high and middle stages have nearly doubled since this was written. The total of girls (including Europeans) studying in secondary schools is 36,392. Of this, 13,430 are Europeans, 12,390 are Indian Christians, 1,573 are Brahmans, 4,673 are non-Brahman Hindus, 467 are Muhammadans, 1,186 are Buddhists, 1,768 are Parsis, and 905 are classed as others. In 1912, 314 girls passed the matriculation, Cambridge senior examination, European high school examination or school final examination, or earned the leaving certificate. Among these, 136 were Europeans. Bombay shows the largest number of secondary schools and pupils—55 and 4,844 respectively. The United Provinces, so backward in the number of girls under education of all sorts, has 31 secondary schools and 3,393 pupils.

525. In *Madras*, girls' secondary schools are on the whole better housed and equipped than boys' schools. Many of them are boarding schools and others have well-managed hostels. In *Bombay*, the whole position of girls' education is regarded by Mr. Prior as unsatisfactory. Among necessary reforms in anglo-vernacular schools he mentions the introduction of a course adapted for girls, the training of teachers, and the increase of grant and the inspecting staff to an extent which will enable aided schools to offer attractive salaries and the inspectress to impress her personality upon the schools. Of the twenty-four English secondary schools in *Bengal*, all (except one which is a government institution) are privately managed (largely by missions) and all but three receive aid—some of the high schools as much as Rs. 500 a month. In the *United Provinces* all the four high schools are managed by missions. A feature in the *Punjab* is the existence of hostels

attached to schools either maintained by missions or by Indian societies. Of the latter, two are reported as having respectively 233 and 180 boarders. In *Eastern Bengal and Assam* the number of secondary schools is small compared with the general numbers under education. But the province possesses a very excellent high school at Dacca with training classes and a boarding house.

526. From several provinces come complaints that the secondary curriculum for girls is unsatisfactory, and that it is necessary to discriminate it from that laid down for boys. Beyond the option of taking a modern European language, the matriculation is the same for both sexes; and at Bombay and Madras a European language is permitted in the case of male students also. Mr. Prior fears that, whereas in India our ideal should have been above all things to educate girls to become good wives and mothers, we have fostered the ideal rendered necessary by our English redundant population—namely, that girls must be so educated as to be able to earn their own livelihood. The Bombay inspectress says :—" It is unfortunate that the school final examination does not appeal to the Indian girl whose horizon is, as a rule, bounded by the matriculation examination. Till this fetish is abolished, it will be impossible to hope for a liberal education for our girls." The report from the *United Provinces* speaks of the need of a differentiated course in order to make secondary education popular. At the same time, the popularity of English instruction appears to have led to overloading of the course; and this, combined with the failure of managers to secure good sanitary conditions, is attributed by the chief inspectress as the probable cause of the prevalence of consumption among girls in boarding schools and those who have recently left. Government has accordingly forbidden the teaching of English in lower classes on pain of the loss of grant. In *Madras* the problem appears largely to have solved itself. There the secondary curriculum is no longer dominated by the matriculation examination. The school leaving certificate scheme recognises music, domestic economy and industrial subjects and does not insist on English. It is thought that schools will adapt their courses more and more to the requirements of girls. *Secondary curriculum.*

527. The great majority of girls at school read in primary schools. Here the number of European schools is negligible. The total for Indians, including vernacular middle schools, is 13,012 schools with 479,283 pupils; the pupils in boys' schools raise the number to 831,776. The distribution according to religions, etc., is sufficiently indicated in the preceding table. Of the total number of schools 8,963 are aided and 569 are government institutions. *Primary schools.*

528. The system in the *Central Provinces* is one of government schools. Of a total of 309 primary schools, 198 are managed by government. " The policy of the administration (the resolution states) has been to take into its own hands and maintain the management of this branch of education, except in so far as it is supported by private bodies. The development of girls' schools as carried out by individual local bodies was unequal and unsatisfactory. For the present at least this policy must be maintained; until female education has established itself more firmly, its control and administration must be direct and centralised. Later in its development it may be found possible to assimilate its administration with that of the education of boys." A system of testing the probable permanency of new schools has recently been introduced. A committee is formed in the village, and this body manages the school for two years, expenditure being equally divided between subscriptions and grant. The school, if successful, is then taken over by government.

529. Next come the provinces which depend largely on a board school system. In *Bombay,* where board schools preponderate, Mr. Prior recommends (among other measures) that the administration of board and municipal schools be placed in the hands of government direct, and that aided schools should receive as grant three-fifths of their admitted expenditure. The majority of schools in the *Punjab* are managed by the boards. They are not well accommodated; very few schools have any space for play-grounds, and even the class-rooms are small and ill-ventilated. In the *United Provinces* the number of primary schools is nearly equally divided between publicly and privately managed institutions. There are a certain number of government

schools, called (as in the Bengals) model schools—a designation which with a few exceptional cases of surprisingly good work is (as will presently be shown to be the case also in the Bengals) a misnomer. The condition of board and municipal schools varies largely according to the interest of the chairman.

530. In the remaining provinces the great majority of schools are of the aided type. *Madras* has 181 government schools and a still smaller number managed by local bodies. The majority are aided and are largely under mission management. The mission schools are generally well-housed. Houses on a type-plan are also being constructed for government schools; but many are still held in rented buildings. *Bengal* and *Eastern Bengal and Assam* possess a few model schools. These were intended to be model government institutions, but in reality were neither. They were left to the management of boards till 1908 when government took them over. Nor are they yet models of what schools should be. "The difficulty," says Mr. Prothero, "in connection with these schools was that the scheme was sanctioned on the understanding that the public should provide the necessary buildings and undertake to keep them in repair. This obligation has not been properly fulfilled. The housing and equipment of these schools is often lamentably bad. There is a special need for proper teachers' quarters. For want of such accommodation it is difficult to retain the services of young female teachers." They have been similarly unsuccessful in Eastern Bengal. "The so-called model schools," writes an inspector, "are each staffed by a master (in two cases by mistresses) on a pay of Rs. 6, supplemented by an allowance of Rs. 7 a month for the attendance of the girls. A maid servant is entertained on Rs. 3 a month, and there is a grant of Rs. 28 a year for contingencies and prizes. The housing is generally poor, as also the equipment." But the vast majority of schools in these provinces are privately managed and receive aid from the boards. "The merit of these schools," says the Bengal report, "appears to depend upon whether there is any special interest taken in female education by members of the district board or of the subordinate inspecting staff. If the school is a mixed school for boys and girls the girls are often put in a corner and given only stray moments of the teacher's attention, though he draws a special allowance for teaching them. As a rule, these girls' schools are in an extremely bad condition. All the available funds are wanted for boys' schools, and the pay of the *pandits* of these girls' schools is generally too low for efficiency. Often age is their only qualification." On the other hand the aided mission schools in Calcutta are reported to be satisfactory. A new departure in Bengal was the opening, in 1910, of twenty-one peasant girls' schools. The number is now thirty-two. These are intended to reach a class of people usually averse to female education. But, save that the teacher's pay has been fixed at a rate higher than the ordinary (to wit, Rs. 10), the report does not state the special characteristics of these schools. In Eastern Bengal and Assam, 82 per cent. of the institutions are of the aided type; "the numbers of aided schools," says the report, "increased from 2,295 to 4,094, while that of their pupils has risen from 41,746 to 91,093, or by 118·2 per cent. This result is due in a large measure to the allotments made from imperial funds, during the quinquennium under review, for the foundation of new primary girls' schools." In *Burma*, nearly all schools are of the aided type. It has already been noticed that the percentage at school, while higher here than in any other large province, is practically stationary, though social conditions favour expansion. The report has some interesting remarks which may have a bearing on this point:—

"The question of the expansion of female education came under careful examination in 1911. It is complicated by the fact that *pongyis* do practically nothing and missions relatively little towards the vernacular education of girls. Missionary agencies appear to prefer anglo-vernacular work and only two or three monks in the whole province have included girls among their pupils. Hence if missions and monks adhere to these lines, in order to provide sufficient vernacular schools for girls the department will have either to establish state schools or to encourage vernacular lay managers to set up aided schools. If the expansion of boys' vernacular education is to be carried out mainly or largely through the monastic schools, an undesirable multiplication of schools and waste of teaching power and money may ensue, since, as *pongyis* do not receive girls, separate provision for girls will be necessary in each school area. If, on the other hand, expansion is to proceed largely through lay schools, duplication of this kind can be avoided, because in such schools co-education is always possible. As

the female school-going population is put at 889,758, of whom scarcely 80,000 are reported as being under instruction in public or private schools of any sort, it is clear that facilities for female education require expansion tenfold before the mass of the sex can be considered literate. To overtake this task provision not only for teachers but also for inspection (a specially difficult problem) is essential."

In the *North-West Frontier Province* all primary schools save six are managed by boards or aided institutions.

531. The need of a differentiated curriculum is probably less acute in the vernacular than in the English stages of instruction. Girls in primary schools usually (but not always—Bombay is an exception) read the same books as boys, but take some special subjects. Nevertheless, a tendency is observable here also to a more complete distinction. In Madras a list of subjects was issued in 1908, which leaves each manager free to devise with inspecting officers a course suitable to the school in question. Health, house-management and plain needlework are to be taught in a practical manner in every school. A revised syllabus was published in Bengal in 1907, for the infant and lowest classes of girls' schools; it differs from that for boys mainly by adding needlework and domestic economy and omitting drill. In Burma girls still follow in the main the course prescribed for boys, and needlework and calisthenics are not compulsory in primary schools; but the elementary science and object-lessons contain topics suitable for girls. A special course for girls in Eastern Bengal and Assam was framed towards the end of the period on the recommendations of the Female Education Committee. It lays stress upon calisthenics, hygiene, sewing and knitting. It is too early to express an opinion on its result. One inspector fears that the staff of teachers will not be capable of handling it. A teachers' manual has been produced to help the *gurus*. *Primary curriculum.*

532. The number of girls in private institutions is 77,259. It is interesting to find 1,150 girls studying in advanced institutions for Arabic and Persian and 574 in those for Sanskrit. Of the latter a curious example is the Jagatpur Asram near Chittagong, from which girl students have been singularly successful in the examinations of the Sanskrit Board, Calcutta. Nearly 48,000 read in Koran schools. These are small girls, of whom more than half are in boys' schools. There is likewise the Mahakali Pathshala of Calcutta, with over 600 girls and fifteen branches, some as far away as Benares and Rawalpindi. Sanskrit is taught, and the aim is to bring up girls to pay strict attention to the Shastric injunctions in matters relating to domestic life and the performance of domestic duties obligatory on orthodox Hindu women. Further mention is made of these institutions in chapter XX. *Private institutions.*

III.—Special characteristics.

533. The special topics which require treatment are co-education, the systems of grant-in-aid, fees, scholarships, home-teaching, professional and industrial instruction, training, inspecting agencies and special committees.

534. If in the preceding section the paucity of girls' schools has produced a shock, it is necessary to remember that nearly half the girls under instruction (namely, 407,414 out of 952,911) read in boys' schools (see supplemental table 165). In 1907 the percentage of those so reading to all girls at school was 41·9. Now it is 42·8 for the whole of India, while in Burma it is as much as 75·6, and in Madras 57·8. In the Central Provinces the number has more than doubled, but the proportionate increase is concealed by the expansion of girls' schools. In Eastern Bengal and Assam, despite a substantial increase, the same cause has led to a falling off in the percentage. In the Punjab the practice appears to be unpopular; only 5·9 of the girls under instruction are found in boys' schools. During the quinquennium the number so reading has risen from 270,077 to 407,414. *Girls in boys' schools.*

535. In small villages the system of co-education in a single institution is economical and offers an obvious method of increasing the number of girls under instruction. It is accordingly the custom in some provinces to offer a higher capitation for girls than for boys, whether the former read in special or in boys' schools. This is the case in Madras. In Bengal the teacher of a school for either sex receives at least Rs. 2-8-0 a month if he can induce 20 girls to attend regularly, and Re. 1 for every eight girls. In the United

Provinces allowances have been given at various rates—four annas per child, or eight annas per five children. The 'bribe' was continued at the lower rate in 1908, and the enrolment of girls in boys' schools has continued to rise. In Burma, save in the *pongyi kyaung*, the practice is natural enough. In Eastern Bengal and Assam special grants have been offered for girls reading in boys' schools; and the method was commended by the Female Education Committee, since " more girls could be taught in this way than by any other system."

536. Opinions as to the desirability of the practice are varied. First, there is the possibility of violence being done to social feelings. But the system generally amounts merely to the attendance of little girls in primary schools for boys; the number who so attend shows that, at least among large sections of the population, there is no prejudice; and it is to be noticed that small boys too are permitted, without comment, to trespass into the precincts of girls' schools and pursue their studies under the soothing influence of their sisters' society. Secondly, there is the professional distrust, held by many, of the value of co-education. Where only small children are concerned, the effect is probably insignificant. Thirdly, where special capitation is given, there is the suspicion of fictitious entries, nominal attendance, spurious education and undue pressure upon parents. Mr. de la Fosse notices the fluctuations in number which have followed the rise or fall of the rate of grant, the presence or the transfer of an officer who regards the scheme with favour. Probably all that this proves is that in some areas the desire of parents to see their daughters educated is well diluted with a feeling of human kindness towards the ill-paid teacher who will earn a little more if the small sisters accompany their brothers to school for a certain number of attendances. The general idea appears to be that the system is to be encouraged in the case of small girls, since it can do no harm and may do good; but that the real disadvantage of it is that girls are forced to leave such schools at an early age before any permanent impression has been made; and that accordingly it must never be regarded as an excuse for not maintaining and establishing girls' schools wherever this is necessary or possible.

Grant-in-aid, fees and scholarships.

537. The subjects of grants, fees and scholarships may be treated together, since the feature of concession (intended to popularise girls' education) is common to them all. The grant-in-aid system is similar to that for boys' schools, but more generous—not only are special capitations permitted (as shown in the preceding paragraphs), but, says the report from Eastern Bengal and Assam, the calculation of the grant is made with regard to the expenditure necessary for contingencies, for servants and for the conveyance of pupils to school. The proportion of allotment from public funds to the total expenditure is 24·9 per cent. in the case of aided secondary and primary schools for girls, as compared with 14·1 per cent. in that of a boys' school. The levy of fees is optional or non-existent in girls' schools, save in those of higher grade and the more expensive boarding schools. Thus, in English schools the average fee is Rs. 10·7 a year per pupil; in primary schools it is Re. ·23 (about $3\frac{1}{2}$ pence) a year (see supplemental tables 182 and 184). In all classes of schools the average fee is lower in publicly than in privately managed institutions, being in the case of primary schools only Re. ·04. The total fee collection in schools for Indian girls (to which alone these figures refer) is Rs. 3,35,900 a year, or about one-eleventh of the total expenditure. Ordinarily speaking, girls compete for the scholarships open to boys and also have a certain number of scholarships reserved for them. This is the case in Bengal. In Eastern Bengal and Assam, special collegiate scholarships are reserved for girls, and a large number of reserved lower primary scholarships were established during the quinquennium. It is stated that 114 scholarships of different kinds were held by girls in this province during 1912. In the Punjab there is no competitive examination for girls' scholarships, but small monthly sums are paid to most of the pupils who pass the lower and upper primary tests. This, as the director says, amounts to paying girls for attendance, and should, now that schooling is more popular, be superseded by selection. The amount thus given has increased largely during the period.

Home teaching.

538. Home teaching is the sole way of bringing education within the reach of *purda* women whose education during childhood has been neglected or

incomplete. Such classes, writes a missionary lady of experience, give an opportunity to the married and elderly people and to the widows of being able to read. They also create in the minds of the people, who have thus become familiar with education, a greater desire to educate their young daughters, so that this arrangement not only spreads education among the present generation, but also popularises it among them to the advantage of the younger generation. "In Burma," remarked Mr. Orange, "there is no occasion for *zenana* teaching except among the Indians domiciled there, but in every other province *zenana* teaching is carried on either by missionary agencies or by associations of Indians or by both." Doubtless there is a good deal of private tuition. The efforts of government have also increased during the quinquennium in the same direction; but the scheme is costly; its success depends on the existence of suitable teachers, who are still far to seek, and of a sufficiency, which has not yet been reached, of inspectresses; and its scope is naturally confined to large centres. The *modus operandi* is to appoint governesses who either go from house to house or take classes of ladies collected together in the house of some respectable family. Local committees of organisation are formed. Full figures are not supplied in the reports. In Bengal there are 76 teachers of these classes, and the number of pupils has risen from about 1,200 to 1,431. The chief inspectress in the United Provinces remarks :—

"There are now five visiting governesses at work, and there are several places where an appointment would be made if a suitable teacher were forthcoming. On the whole the results achieved so far are far from proportionate to the outlay. In Agra, for instance, there are four visiting governesses and an average of 48 pupils at work daily out of 71 enrolled. But the inspectress reports that the work is so spasmodic that there is little real progress and the pupils hardly reach the lower primary stage; nor is there any real desire for this form of instruction though it is passively accepted when offered. On the other hand there is the fact that many of the better families in a city such as Lucknow are feeling the need of private teaching and make their own arrangements to secure it. In my opinion it is far better that they should be left to do so. No inspectress can have a proper hold over an itinerant teacher or check her work thoroughly while the responsibility of appointing women to such posts is heavy."

In the Punjab it is estimated that there are 723 pupils; and in 1911 forty-five classes were started in Lahore under a strong committee of Indian ladies. From small beginnings in Eastern Bengal there have now sprung classes in nine towns (exclusive of a widows' industrial home), with fifteen teachers and 599 pupils, among whom 254 are Muhammadans. The teachers are generally in government employ, on pay ranging from Rs. 40 to Rs. 50 a month and carriage allowances. Five teachers are provided by mission bodies who receive grant.

Apart from the limitation of scope alluded to above, an obvious disadvantage of the system is that it may foster seclusion, especially by its extension to pupils of tender age who should be at school. It is difficult altogether to exclude these. Again, owing to the intervals which must elapse between the visits of governesses the standard attained is often low. The experiment however is one which is probably capable of considerable results.

539. The professional training of women is confined to medicine and teaching. There are 55 women in medical colleges, and 227 in medical schools. It is unnecessary to add to what has been said in chapter IX, and the training of mistresses will receive treatment presently. Allusion must however be made to the scheme formulated by Her Excellency Lady Hardinge for a school to train Indian nurses and midwives. It is proposed to combine the scheme with a medical college for women at Delhi, in commemoration of the visit of the Queen-Empress. Generous subscriptions have already been made by princes and wealthy land-owners. This institution will remove a powerful check to the medical education of women—the necessity of studying in men's colleges or mixed classes. *Professional training.*

540. The girls who are studying industries are returned as 3,017, of whom 201 are Europeans and 1,372 are Indian Christians. In schools of art there are 56 girls—all with one exception being Europeans, Indian Christians or Parsis. In commercial schools there are 258; but these are nearly all Europeans. In *Madras* presidency there are 753 girls in industrial schools. Presumably a considerable number learn lace making. This, says the report, *Industrial education.*

holds out to women a prospect of earning in their own homes. The director of industries considers the instruction in this subject more efficient than in any other and hopes that, if home firms can be interested in Indian-made lace, a large industry may spring up. In *Bombay* the number of industrial pupils is almost negligible. But government aids a lace school at Nagar, a Salvation Army girls' industrial school at Satara and a Zenana Bible and Medical Mission embroidery class at Manmad. *Bengal* returns 681 pupils. The most important institutions are those situated at Kalimpong in connection with the Church of Scotland Mission under the superintendence of Mrs. Graham. These consist of lace, embroidery and weaving schools. The sale of lace in 1911 realised over Rs. 7,000; and 36 teachers have been trained since 1905 for giving instruction in branch lace schools. The main object is the establishment of home industries. There is a Buddhist school at Darjeeling which combines weaving and knitting with religious instruction in Tibetan, etc. The Mahila Shilpa Asram in Calcutta is a *purda* institution, managed solely by a committee of ladies, which teaches machine stocking-knitting, weaving and needlework—lace making proved a failure. It receives an annual grant of nearly Rs. 6,000 from government. There are other schools—mainly for lace—at Bhawanipur and Entally (Calcutta), Cuttack, Ranchi, etc. These are generally managed by missions and staffed with trained teachers from Kalimpong or, in the case of Roman Catholic missions, with skilled nuns from Europe. There is also a Mission Widows' Industrial Home at Baranagore, with 45 inmates, who learn various industries, including carpet weaving. The *Punjab* has 1,069 pupils. "Gold shoe embroidery is well taught in Delhi, and at Palwal lace and network are thoroughly learnt. The S. P. G. middle school, Delhi, has a Limerick lace class which is entirely self-supporting and in which very good work is done. The Limerick lace done at Queen Mary's College is also particularly good." In other provinces the numbers are small. Convent schools in *Burma* teach cookery, dress making, needlework and lace making; weaving is taught at the S. P. G. girls' school, Shwebo, and in fourteen vernacular schools. There are industrial schools at Dacca and Gopalganj in *Eastern Bengal*, and a widows' home, established by a mission lady, at Orakandi (Faridpur)—needlework and cookery are taught. In the *Assam Valley* four schools have weaving looms; the mission at Nowgong (Assam) has established a weaving class; and in St. Mary's Convent at Shillong girls are trained in laundry work, sewing, house-work and cooking.

541. These last, however, carry us to industrial subjects taken as a part of the ordinary course. Needlework is generally taught; domestic economy frequently. There is a strong tendency to sacrifice utility in needlework for showy and inartistic designs. The Bombay inspectress says that plain needlework is not popular with the parents and the principals of schools are inclined to defer to the parents' taste and encourage showy embroidery. The same complaint is made by the inspectress in the Punjab, who laments the neglect of the old and beautiful patterns for ugly work in Berlin wool and velvet embroidery. The Bombay inspectress also says that the teaching of domestic economy will be valueless till it is supplemented by practical work :—

> "It is evident that the subject is looked upon as one for examination only and it is probable that more than 90 per cent. do not attempt to apply the rules of hygiene, etc. I learnt from an intelligent class (ages varying from 15 to 18), who were able to answer fluently from the notes dictated by the teacher, that they all performed a share of the household duties. On my hazarding the suggestion that it was very easy to dispose of the kitchen refuse by throwing it over the wall into the neighbouring compound, they cheerfully acquiesced and said that that was what they usually did."

Special committees.

542. The extraordinary difficulties connected with girls' education have led Local Governments to take special measures for consulting those concerned in the work of teaching and others interested in the subject, and also, so far as possible, to enlist the advice and co-operation of ladies. A committee was summoned in the United Provinces in 1905 and funds were allotted for giving effect to some of its recommendations. During the quinquennium a standing committee was established in Eastern Bengal and Assam. Half the members were ladies. The first session of the committee was held in 1908, and sessions were held in subsequent years. Among its principal recommendations have been the creation of a network of board schools in Eastern Bengal, for which

end a survey has been undertaken; the framing of a special curriculum, with special text-books, for all but the highest classes; an active policy of training and of *zenana* classes; and special measures for Muhammadans. The existence of this committee, working closely with the department, has no doubt had admirable results.

543. As one of the effects of these central advisory bodies attempts have been made to constitute local committees. These were established in the United Provinces in 1908, but have not flourished. They generally lacked, says the report, the spontaneous vitality that would ensure regular interest and work; a few have shown fitful signs of life; still fewer have evinced a genuine interest in their work; the majority have died a natural death. The committee in Eastern Bengal and Assam recommended the formation of committees of ladies at district and sub-divisional headquarters. The result is not reported; but there has been a general reorganisation of school committees and ladies have been placed on them. *Local committees.*

544. From nearly all provinces comes the complaint of the scarcity of women teachers. The attendance of small girls at school is tolerated or even desired by parents in many localities. Their continuance at school after the age of twelve is disallowed. The idea of their entering a profession is generally viewed with abhorrence. Hence the number of little girls to be taught far outstrips the number of women available to teach them. Owing to this dearth, female teachers can command a higher wage than men. A lady B.A. may commence service on pay which the less rare male commodity can attain only after some years. But, even so, women are often not forthcoming —especially in elementary schools. When this is the case, men considerably past the prime of life are generally selected for this office. In default of women their utilisation is generally approved and proves fairly satisfactory. Indeed, we learn that in a certain district of the United Provinces "most of the so-called schools in the villages are merely providing a stipend for some female, and could only discredit female education;" while the chairman of the board in another district writes, "At the present stage of female education, the employment of superannuated male teachers has this advantage that, in order to secure a means of livelihood for themselves, they create a desire for female education in villages which could otherwise perhaps not be touched by the movement for years." But the general cry is for women to teach girls; and their paucity is regarded as a serious obstacle to progress. In some provinces the majority of girls (even of those reading in girls' schools) are still taught by men. Nevertheless improvement, even in backward localities, is reported. In provinces where education has made headway, the condition of things is much more satisfactory. Full figures for women teachers are not available. Those for a few areas in advanced provinces will give a sufficient indication. In Madras, the southern circle shows a majority of women over male teachers in girls' schools, in the central circle male teachers form only 36 per cent. of the total. In the less advanced northern circle the employment of male teachers was almost the rule till some improvement was effected in the last year of the quinquennium. In Bombay there are 1,154 primary girls' schools, and no less than 1,342 women teachers in them. *Supply of women teachers.*

545. Training presents an added difficulty. Even in Bombay, where training facilities are particularly numerous and of long standing, only 595 of the 1,342 mistresses just mentioned have undergone training. Not only are the remaining 747 untrained; but 615 of them have not even passed the vernacular final examination. An inspectress in Madras writes, "The child widow is marked out by all the circumstances of her life to be the teacher of the future. Other women teachers are full of family cares and this is one reason why they are seldom successful in their school work." Another reason appears from the report of an inspectress in Bombay, who says that the husbands of married teachers are inclined to interfere in the work of the schools and to instigate their wives to submit petitions and generally to neglect their duties. "There are," she says, "a number of mistresses in the department with worthless husbands whose chief purpose in life seems to be to get their wives into trouble." *Training of mistresses.*

546. There are now 85 institutions for training mistresses, with 1,508 pupils, as against 63 institutions and 1,278 pupils in 1907. Of the institu-

tions, 24 are managed by government, three by local bodies, one by the native states in Bombay, and 57 (of which 49 are aided) by private bodies—largely missions. The total cost has risen from Rs. 2,43,236 to Rs. 3,70,160, of which over 2½ lakhs are provided by government, nearly three quarters of a lakh from private (largely mission) sources and most of the rest by local bodies or the native states of Bombay. The average annual cost of a pupil is found to be Rs. 261 (but, since expenditure is not always shown, in reality higher) and rises to Rs. 368 in the United Provinces. The most complete arrangements are in Madras and Bombay, each of which has over 400 pupils under training. Bengal has no institution for training secondary mistresses; the vernacular training classes (with the exception of two government schools) are generally managed by missions. Eastern Bengal and Assam had no arrangements of any kind; but government classes were established both for primary and secondary teachers at Dacca during the quinquennium and mission bodies in Assam are being encouraged to open classes. The United Provinces has some good institutions, notably the Isabella Thoburn Normal School at Lucknow. The Punjab has a government school at Lahore and classes attached to secondary schools. In Burma there are four aided mission schools. In the Central Provinces there are two government colleges. A more detailed description of the arrangements in each province will be found in appendix XXVI.

Administration and inspection.

547. It is an accepted doctrine that the administration and inspection of girls' schools in India should, so far as possible, be in the hands of ladies. The difficulty of transferring these institutions from the ordinary to a special agency arises from the smallness of their number and the fact that they are scattered about often at long distances where their inspection (unless combined with that of boys' schools) can be carried out only at considerable inconvenience and the expenditure of much time and money. In 1907, there were 14 inspectresses, of whom all those in Madras, Bombay, Bengal and the Central Provinces (numbering seven), as well as the chief inspectress in the United Provinces, were in the Indian educational service, while the other four in the United Provinces and two in the Punjab were in the provincial service. There were also 13 assistant and seven sub-assistant inspectresses, making a total of 34. Burma and Eastern Bengal and Assam had no female inspecting staff. In the latter province a staff was created during the quinquennium. The sanctioned total is now 21 inspectresses (of whom 12 are in the Indian educational service), 17 assistant inspectresses and seven sub-assistant inspectresses. (One sanctioned post of inspectress and one of assistant inspectress in Burma have not been filled.) The transfer of control and inspection from the ordinary agency is not complete; and different arrangements have been made in different provinces, such as the transfer of certain classes of institutions to the inspectresses, with duties of inspection and advice as regards others.

548. *Madras* has three inspectresses and ten assistant and sub-assistant inspectresses. *Bombay* has two inspectresses. In *Bengal* there are two inspectresses and six assistant inspectresses; their powers of control have been extended, but administrative matters still rest with the inspectors. The system prevailing in the *United Provinces* has been entirely changed. There were four inspectresses under the orders of the inspectors, the latter being indirectly responsible for the education of girls. Their number has now been raised to seven, and their pay to Rs. 150 rising to Rs. 250. Their official relations with inspectors have been severed, they have been placed under the control of a chief inspectress, they inspect schools of every type, and they are solely responsible for model girls' schools. The chief inspectress mainly directs and organises; she inspects only the larger schools and those in special need of attention. An assistant inspectress has been put in special charge of the city schools in Lucknow, apparently with excellent results. In two districts a Hindu lady has given valuable assistance as honorary inspectress. In another case the results were less happy. In the *Punjab* there are two inspectresses and two assistant inspectresses. A scheme is under consideration for the appointment of an assistant inspectress in each division with a view to establishing training classes, the assistance of local effort, etc. Posts of inspectress and assistant inspectress have been sanctioned for Burma, but

have not been filled owing to want of funds. Two inspectresses and two assistant inspectresses have been appointed during the quinquennium in *Eastern Bengal* and *Assam*. The *Central Provinces* has one inspectress and two assistant inspectresses. As this is inadequate, many schools have had to be handed over to deputy inspectors—an unsatisfactory feature, since the presence of an inspectress is a powerful factor in the success of schools and their management by women has popularised them.

Photo-Mechl. Dept., Thomason College, Roorkee

MAYO COLLEGE, AJMER.

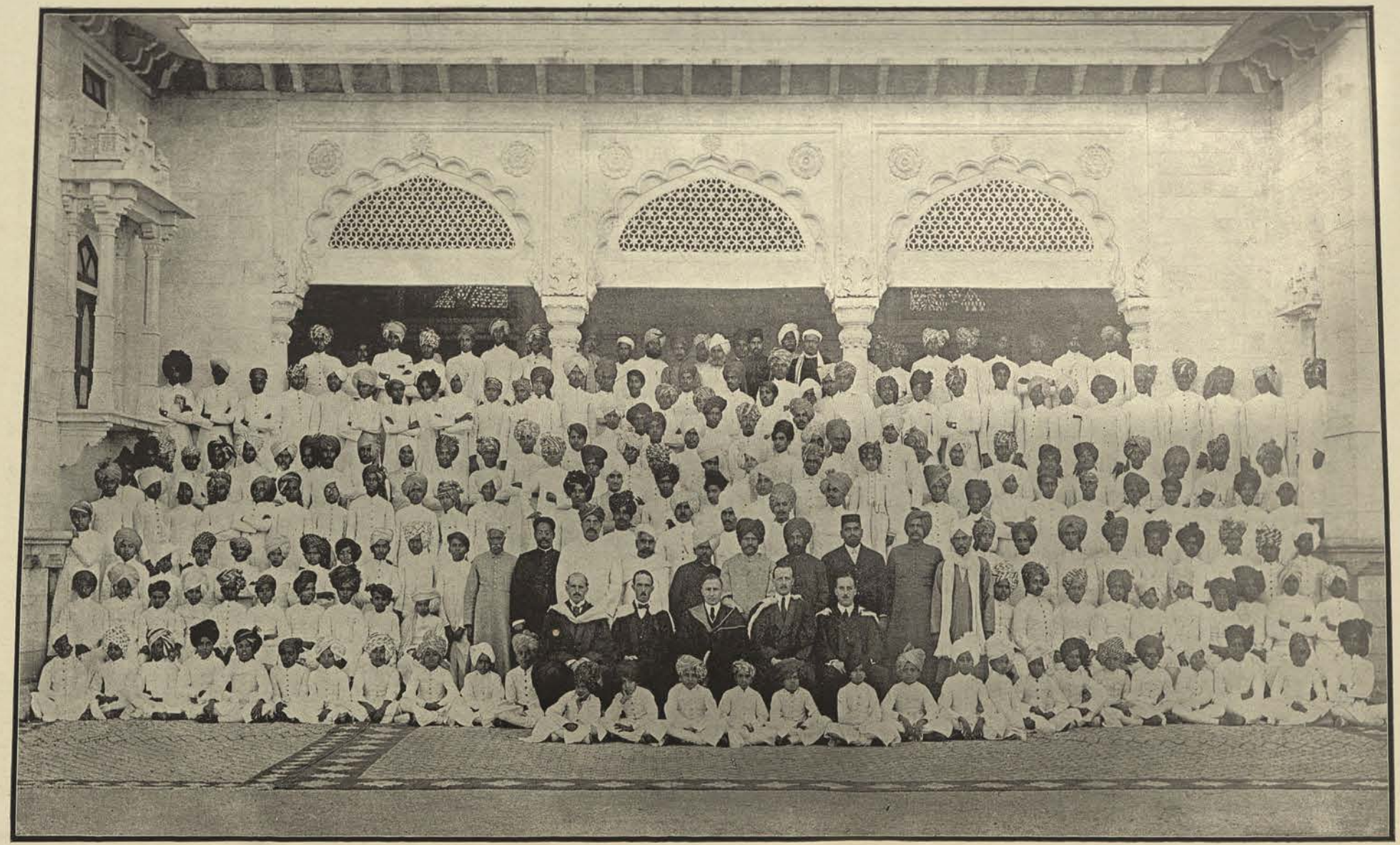


Photo.-Mechl. Dept., Thomason College, Roorkee.

MAYO COLLEGE, AJMER.

CHAPTER XIV.

EDUCATION OF CHIEFS AND NOBLES.

549. In a country where over one-third of the area is ruled by Indian chiefs, and where class distinctions are, in Lord Curzon's words, ingrained in the traditions of the people and indurated by prescriptions of religion and race, it is necessary to make special provision for the education of future rulers and nobles. For this purpose special institutions have been established, amply endowed by the chiefs themselves and aided by government to maintain a strong staff. The original object with which these colleges were founded was, again to quote Lord Curzon, " in order to fit the young chiefs and nobles of India, physically, morally and intellectually, for the responsibilities that lay before them, to render them manly, honourable and cultured members of society, worthy of the high station that, as Ruling Chiefs, as thakurs or sirdars, as landlords or *jagirdars*, or in other walks of life, awaited them in the future. With this object in view the founders of these institutions, deliberately selecting the English public school system as that which had best succeeded in doing a similar work among the higher ranks of English society, sought to reproduce its most salient features here." *Intention of the colleges.*

550. The best known of these institutions are the four Chiefs' colleges— the Mayo College at Ajmer for Rajputana, the Daly College at Indore for Central India, the Aitchison College at Lahore for the Chiefs of the Punjab, and the Rajkumar College at Rajkot in Kathiawar for the Bombay Chiefs. These were founded between the years 1870 and 1886. It was one of Lord Curzon's many activities to acquaint himself with their working and to call a conference on the subject in 1902. As a result, they were considerably reorganised; and a special branch of the Indian Educational Service was established, numbering fourteen officers, together with Indian assistants, to carry on the instruction. The administration of the colleges is in the hands of councils, consisting of political officers and chiefs. At the Mayo College and Daly College His Excellency the Viceroy is president. His Excellency the Governor of Bompay is president of the Rajkumar College Council. At the Aitchison College the president is His Honour the Lieutenant-Governor of the Punjab. The ultimate control of the colleges rests with the Foreign Department. During the quinquennium the number of pupils in these colleges has increased from 319 to 413, and the expenditure from about 2½ lakhs to about 4 lakhs, to which government contributes about 1½ lakhs. *The four Chiefs' colleges.*

551. The five years have witnessed a steady development. The number of pupils at the Mayo College has risen from 143 to 202, the income of the college from Rs. 83,000 to Rs. 1,20,000, and the chiefs have added over two and-a-half lakhs to the endowment fund. The beautiful building has been enlarged by seven class-rooms and two laboratories, the latter fully equipped by His Highness the Maharaja Scindia of Gwalior. New houses for the residence of the pupils have been erected. His Highness the Maharao of Kotah has presented an up-to-date sanatorium, with quarters for nurses. The college property has been increased by the addition of 52 acres of land, purchased with a lakh of rupees, the gift of His Highness the late Maharaja of Jodhpur. His Highness the Gaekwar of Baroda presented a squash racquet court. After the Durbar at Delhi, Her Imperial Majesty the Queen-Empress visited the college. On this occasion every pupil was presented to Her Majesty, and the college squadron furnished the escort when Her Majesty visited the city. *The Mayo College, Ajmer*

552. The numbers in the Daly College have, notwithstanding disorganisation caused by the visitation of plague to Indore, risen from 54 to 64. A system of prefects was instituted at the close of the quinquennium. The growth of a healthy school spirit is particularly noticed. There have been considerable building operations. His Highness the Maharaja Scindia of *The Daly College, Indore.*

Gwalior presented a cricket pavilion. New boarding houses have been erected. Old boys, who have inhabited rooms, are co-operating in their upkeep, etc. The new college building was also completed and opened by His Excellency the Viceroy just after the close of the quinquennium.

The Aitchison College, Lahore.

553. The average number of pupils in the Aitchison College has risen from 72 to 100 and stood at 105 in the last year of the quinquennium. This college is peculiar in that some of the pupils attend the government college in Lahore. A useful adjunct to the institution is a small agricultural and dairy farm. As a matter of detail it may be mentioned that the conversational method of teaching English has been adopted in the lower forms and has been found eminently successful. During the period places of worship have been constructed for the Sikh and Hindu pupils.

The Rajkumar College, Rajkot.

554. At the Rajkumar College 49 Kumars were admitted during the five years against 46 withdrawals, and the number at the close of the period was 42. The finances have been strengthened, the fees now averaging Rs. 30,000 a year. Many gifts have been made to the college—a swimming bath by His Highness the Jam Sahib of Navanagar, two squash racquet courts by His Highness the Raja Saheb of Dhrangadhra, and a sanatorium. His Highness Sir Bhavsinghji of Bhavnagar has published a beautiful history of the college. There is a successful carpentry class. It is interesting to learn that fifteen ex-pupils have during the quinquennium been installed as rulers, ten have proceeded to the Imperial Cadet Corps at Dehra Dun, and sixteen were included in the escort provided by that corps for His Imperial Majesty at the Durbar at Delhi. A sign of the interest maintained by chiefs in the college where they studied is the establishment of a Past Kumars' Club, for which liberal funds have been subscribed.

General characteristics.

555. A notable feature of the college life is the strictly residential system. Sometimes the Kumars live in hostels, sometimes in separate houses erected by the family to which they belong for the reception of its scions. Tutors and guardians (*Motamids* and *Musahibs*) are placed in charge. And the pupils are constantly in touch with the English staff on the playing-fields and elsewhere. The different parts of education are treated in due perspective. Great care is bestowed on physical upbringing. Riding, tent-pegging, football and cricket are as much a part of the daily life as are intellectual studies. As an instance of the attention paid to religious training it may be mentioned that the Aitchison College possesses a *masjid* for the Muhammadans, a *gurdwara* for the Sikhs and a *mandir* for the Hindus (the two last, as mentioned above, recently constructed); the pupils attend these two or three times daily; and qualified religious instructors are provided. The bearing and quiet discipline of the Kumars cannot but impress the visitor. It would be hard to find places of instruction more truly and broadly educative, or better calculated to achieve the object in view. Inured from an early age to a simple manner of life, to a careful physical training and to the discipline which, in teaching to obey, teaches also to rule and increases proper self-respect; among quiet surroundings and the influence of dignified buildings and well-ordered playing-fields, the future chiefs and nobles imbibe the education best suited for their calling in life.

Courses and examinations.

556. Yet, even in the more conservative areas of India, the exigencies of modern life, the demand for higher forms of efficiency and specialisation, have made themselves felt. A strong and laudable desire has evinced itself among the chiefs (and freely voiced by Her Highness the Begum of Bhopal) for further improvement in the teaching capacity of the existing colleges and the addition of facilities for an altogether higher standard of instruction equivalent to that required in attaining a degree. The former demand has been met by the institution at each of the colleges of a diploma examination (first held in 1905), common to them all, the subjects in which are English, history, geography and mathematics; and one out of each of the following groups :—(*i*) any vernacular, (*ii*) either science or Sanskrit or Persian, (*iii*) either administration or advanced mathematics. The numbers of those who have appeared and passed during the quinquennium are 89 and 79 respectively. This examination is regarded as the equivalent of the matriculation by the University of Allahabad in the case of pupils of the Mayo College (it

is understood the University is reconsidering this arrangement) and by the Punjab University in the case of pupils of the Aitchison College. The University of Bombay refused recognition of the examination in the case of pupils of the Rajkumar College, partly because a classical language formed no necessary part of it. Further, to satisfy the wish for a still higher standard, a post-diploma course, extending over three years, and comprising English, history and studies in administrative subjects of considerable difficulty, was established in 1907 at the Mayo College, Ajmer, and in August 1909 at the Rajkumar College, Rajkot; in 1912 the Daly College, too, had a class of three students. It was afterwards found convenient to concentrate this course at the Mayo College. The passing of the examination is regarded as a qualification equivalent to the B.A. for government service by the Government of India and the Local Governments of Bombay, Bengal, the United Provinces, the Punjab, the Central Provinces and the North-West Frontier Province. Though the number of candidates is few (three having passed out of five presented during the quinquennium), the experiment is regarded as sufficiently promising to justify further extension of the system. The best method of effecting this is now under consideration and important development may be expected in the future. The need for increasing efficiency has thrown a strain upon the staff and steps have been taken to increase it. And the re-adjustment of organisation and courses to provide for higher study without detriment to the essential features of the life in the colleges requires careful solution.

Inspections.

557. Before leaving this subject, it is necessary to state the change which has been made in the arrangements for inspection. Previously the Director of Public Instruction in the Punjab was responsible both for this and for the conduct of the examination. In 1907-08, the Director General of Education in India, assisted by another officer, performed these duties. In both cases the task was found impracticable as an addition to the ordinary labours of the officer concerned. Accordingly in 1908, it was resolved that two educational officers (one qualified in science and mathematics, the other in literary subjects) should annually be selected and receive honoraria for inspecting the colleges and for aiding in the conduct of the examination, the general supervision of which rests with the Department of Education in the Government of India.

Other colleges and schools.

558. Besides these four colleges, which serve the large collections of native states in northern, central and western India, there are institutions in other localities for the education of chiefs and nobles controlled by Local Governments. At Newington, Madras, the Court of Wards maintains a school for the minor proprietors of estates that come under their management. It contains thirteen pupils and is well reported on. In 1909-10, at the instance of the Maharaja of Bobbili, government appointed a committee to draw up a scheme for a zamindars' college. This still awaits the raising of funds. Efforts are made in the Bombay presidency for the education of Girasias and Talukdars, partly in special schools as at Wadhwan, Gondal, Sadra and Godhra, partly in hostels as at Dandhuka (where an excellent building has just been completed) and at Nadiad for those who cannot afford education at the special institutions,* and in the Talpur boarding house attached to the Sind *madrassa* for descendants of the ancient Mirs of Sind. In Bengal, the period has seen the amalgamation of the *madrassa* at Murshidabad—a high school intended for the education of the Nizamat, or descendants and relations of the Nawab—with the Local Government high school. The Nizamat boys are lodged in a special hostel where provision is made for their discipline and religious training. Several sons of zamindars read at the Ranchi, Hazaribagh and Chaibassa High Schools, at the first of which hostel arrangements are made for them under the supervision of the European headmaster. Some of the feudatory chiefs of Orissa read at the Mayo College, others at the Rajkumar College at Raipur. The Colvin Talukdars' school at Lucknow, for the sons of the nobles of Oudh, has been greatly improved. The staff has been strengthened by the addition of an English vice-principal; the pay of the Indian teachers has been revised; the accommodation in class rooms and

* Annual Report of the Talukdari Settlement Officer for the year 1911-12.

hostels has been increased; a science laboratory, a new library and a common room have been erected by subscription; Maharaja Sir Bhagwati Prasad Singh of Balrampur has presented a swimming bath; the Sajjad Memorial hall has been added; and a plot of land purchased for a demonstration farm. "I have no hesitation," says the inspector of schools, "in praising very highly the painstaking care that is bestowed upon all the boys now being educated here. The work in school, the games, and the supervision of the hostels and of the menial staff are all very carefully organised and systematically checked." The only cause for regret is that more of those for whom the institution is intended do not make use of it or do not enter it at a younger and more malleable age. The highest enrolment recorded was in 1910, when the numbers reached sixty-four. The Aitchison College at Lahore has already been briefly described. But it is interesting to learn that a rough annual census is taken in the Punjab with a view to discovering how far the sons of chiefs and gentlemen of rank are being educated. So far as such figures are capable of exactitude, it is found that out of 520 such boys, only five were undergoing no education, while the great majority are in schools and colleges. In the resolution the Lieutenant-Governor says, "The Queen Mary's College will, it is hoped, eventually do for girls of good family what the Aitchison College is doing so well for boys of the same class." Sons of the Shan Chiefs in Burma are educated in a special anglo-vernacular school at Taunggyi, which is reported to be flourishing. At Raipur in the Central Provinces there is a Rajkumar College for the numerous states and zamindaris of the eastern part of that province and for the neighbouring states of Bengal There are 27 pupils. In 1909, the final examination of the college was recognised by the University of Allahabad as equivalent to the matriculation. In 1910, a science laboratory was completed. The system of religious instruction has continued with success. The question of reorganisation is being contemplated, and just after the quinquennium closed a member of the Indian educational service was appointed principal.

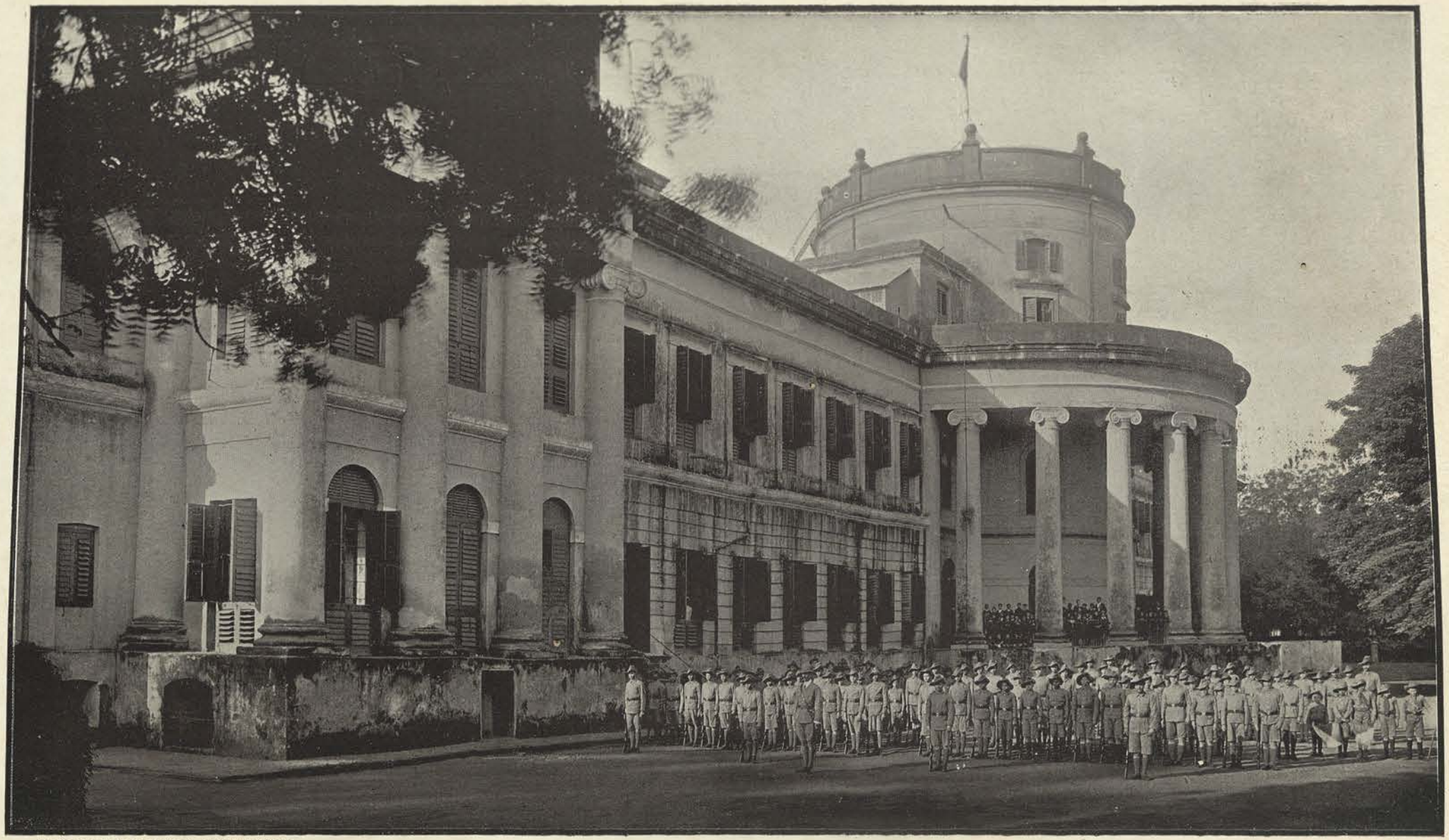


Photo.-Mechl. Dept., Thomason College, Roorkee.

LA MARTINIERE FOR BOYS, CALCUTTA.

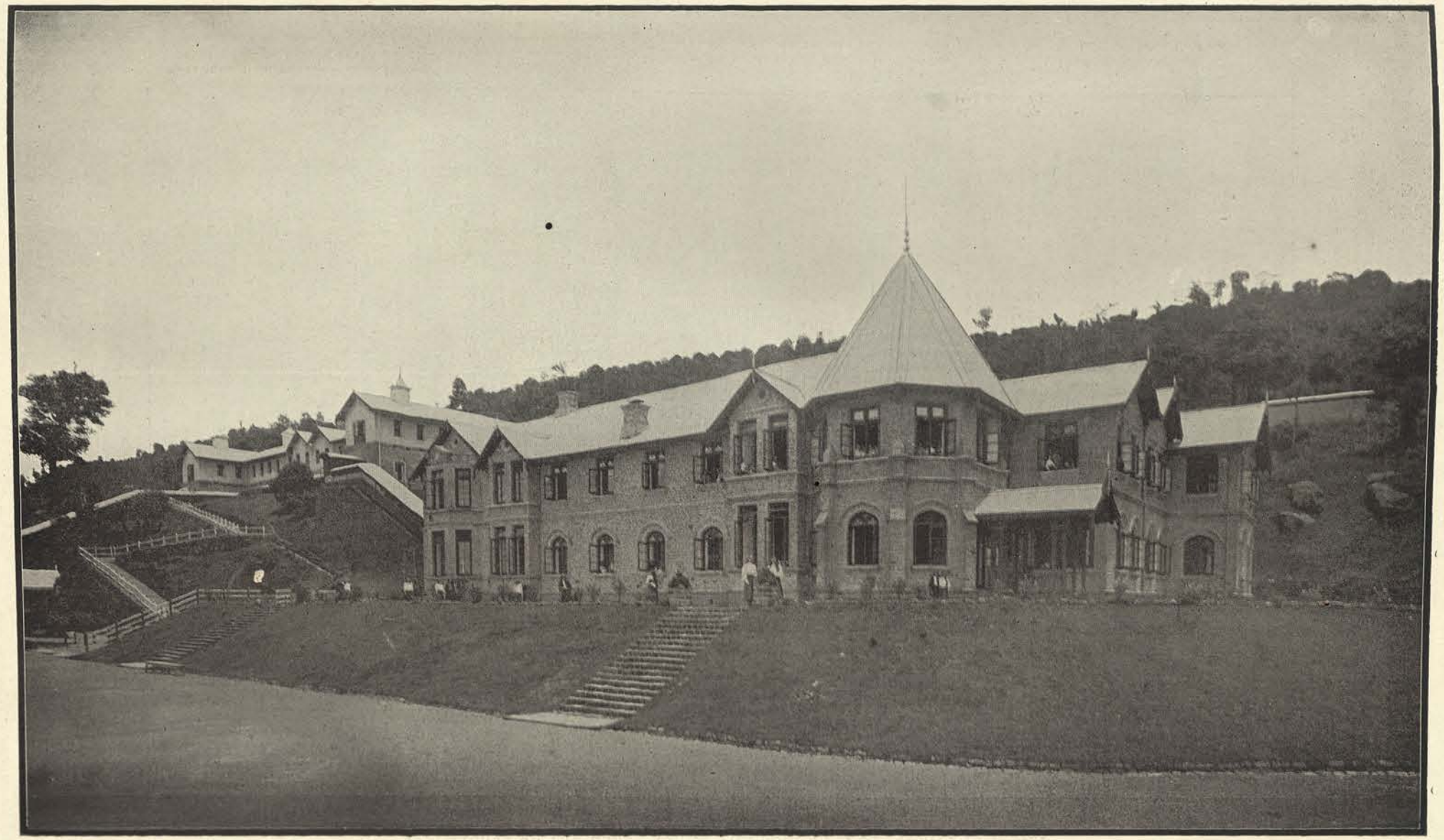


Photo.-Mechl. Dept., Thomason College, Roorkee.

DOW HILL GIRLS' SCHOOL, KURSEONG.

CONFERENCE ON THE EDUCATION OF THE DOMICILED COMMUNITY IN INDIA.
SIMLA, JULY 1912.

Photo.-Mechl. Dept., Thomason College, Roorkee.

BACK ROW.—Mr. Milne, Mr. Covernton, Mr. de la Fosse, Mr. Williams, Mr. Spence, Mr. Abbott, Mr. Wright, Fr. Flink, Mr. Savage, Revd. Lewis, Revd. Gillan, Mr. McClain.

SECOND ROW.—Mr. Arden Wood, Mr. Prior, Revd. R. Smith, Mr. Cunningham, Mr. Chapman, Fr. Vander Schueren, Mr. Read, Brother Ryan, Fr. Dr. Norman, Fr. Kuss, Lt. Spiegelhalter, Mr. Kave.

SEATED.—Mr. Lee, Mr. Hallward, Archdeacon of Calcutta, Mr. W. H. Wood, Bishop of Lahore, Sir. Harcourt Butler, Bishop of Bombay, Mr. Sharp, Mr. Madge, Dr. Bourne, Mr. Kuchler, Mr. Busher, Revd. Pakenham Walsh, Mr. Richey, Revd. Dr. Graham.

IN FRONT—Revd. Manley, Revd. Dr. Francis, Mr. Sanderson.

CHAPTER XV.

EDUCATION OF EUROPEANS.

I.—General.

559. Special institutions are maintained for the education of "any person of European descent, pure or mixed, who retains European habits and modes of life." In addition, fifteen per cent. of the number enrolled in each school may be Indians (in Bombay twenty per cent.). The definition is a reasonable one, as was pointed out at the conference of 1912. The report from Bengal states that it is too wide for purposes of competition for scholarships. Scholarships for Europeans are distinct from those for Indians, as are also curricula, examinations, etc. *Definition.*

560. Some of the European schools were founded at an early date—the Calcutta charity schools, the Doveton College, the Martinières, etc. In 1859 Bishop Cotton appealed for a school in the Himalaya. The advantage of locating schools in a healthy climate was obvious. The Bishop Cotton and the Lawrence Military Schools, as well as many other institutions, are to be found in the hills or in salubrious places like Bangalore. The question of the education of Europeans and the domiciled community came for a time into prominence owing to this appeal and Lord Canning's minute on the subject in the succeeding year. The main policy laid down in the minute was self-help with liberal aid for the accomplishment of a task which neither government nor mission bodies could undertake. Save for a special report which showed that in 1876 there were 15,067 children of the domiciled community at school out of a total of 26,649, and that government spent annually $1\frac{3}{4}$ lakhs on the schools, the problem sank into comparative obscurity till it was revived by Lord Lytton in 1879, when Archdeacon Baly's Committee was constituted and made some striking recommendations. In 1883, a code was issued which prescribed a system of aid by results. The whole question was again raised at Lord Curzon's conference in 1901. Two committees were formed—one, the Hill Schools Committee, to enquire into the administration of certain institutions, the other, Mr. Pope's Committee, to revise the code. This brings us within two years of the quinquennium under review. The revision of the code, the grants made during the period and the conference held just after its close will be dealt with presently. An admirable summary of the history of European education up to 1886 is to be found in the first quinquennial review, by Sir Alfred Croft. *History.*

II.—Progress in the quinquennium.

561. In 1907 Mr. Orange observed that the number of Europeans and of the domiciled community under instruction showed no tendency to increase. Inclusive of those reading in schools for Indians, it was 29,174 in 1897 and 31,130 in 1907. Mr. Orange did not conclude from this that the possible maximum had been reached. On the contrary, assuming that the number of this community must have increased and having regard to the fact that in 1892 the number under instruction nearly equalled those of a school-going age (26,000), he considered that probably a greater proportion of the lower class were growing up out of the reach of schools than was the case ten and fifteen years ago. The figures available at the close of the last quinquennium warranted the supposition that some 7,000 children are going uneducated. On the one hand, Mr. de la Fosse writes, that, though the figures in the United Provinces would seem to show that there are children growing up illiterate, the discovery of such cases is comparatively rare and is confined to places far removed from schools. Sir A. Bourne suggests that a slight diminution of the numbers at school in Madras is due to a diminution of the European population of that presidency. The Burma census report* states that every adolescent and adult member of the European and Anglo-Indian races in that province is literate. On the other hand we have the social *Figures of schools and pupils.*

* Census of India, 1911, Burma Report, Part I, page 170.

conditions prevalent in the *Kintals* of Calcutta and similar slum populations in Madras and other large cities. And Mr. Wright observes that in the Central Provinces during the past ten years the European and domiciled population has increased by 54 per cent., the children at school by only 6·7 per cent. Too much regard must not be paid to provincial figures and deductions from them; for members of this community frequently avail themselves of educational facilities in provinces other than that of their residence.

562. In British India as a whole the number of European schools and colleges has slightly decreased, owing to the disappearance of collegiate departments which mainly existed in name and of primary schools which, save as affording a preparatory stage in small places, are not generally regarded as serving the needs of the community. Pupils have increased from 29,882 to 33,551 (see supplemental tables 186 and 193). Not all these pupils, however, are Europeans; and, on the other hand, there are Europeans reading in schools primarily intended for Indians. There are 2,271 Indians reading in European schools and 3,021 Europeans in schools for Indians. The number of Europeans at school including 71 in private institutions would therefore be more correctly stated as 34,372. But this figure again is fallacious. It does not include pupils in schools situated in areas not covered by the provincial reports; and one of those areas—the civil station and cantonment of Bangalore—is one of the most important centres of European education in India, containing seventeen schools with 1,905 European pupils drawn, not merely from the place itself, but also from distant provinces. The addition of these brings up the number at school to 36,277. This represents a substantial advance upon any previous figure reported, accounted for partly by the increase in those at school and partly by the previous omission of the Bangalore figures. The figure is still slightly under-estimated as it takes no account of schools in places like Quetta and Hyderabad.

Percentage of population at school.

563. Nor is it easy to calculate the European population of a school-going age. The total number of Europeans and the domiciled community in all India (both British provinces and native states) is now returned as 301,433. But the ordinary formula of fifteen per cent. as representing the proportion which should be at school does not hold. First, the actual strength of the British troops serving in India is 75,319 (*viz.*, 2,330 officers and 72,989 in other ranks). The proportion of children is naturally less in a military population (where marriage is restricted by the limit of soldiers' wives permissible on the strength) than in a settled civil population; nor are the figures of children studying in regimental schools shown in the returns. Second, a considerable number of Europeans, civil and military officers, merchants, etc., habitually send their children to be educated in England; while a certain portion of the well-to-do domiciled community undoubtedly follow the same practice. It would perhaps be reasonable on these grounds to deduct 60,000 from the population for purposes of calculating the proportion which is of school-going age. If we take the population as 240,000 and the number at school as 36,000, the proportion at school would be 15 per cent. This rough calculation (which must be taken for what it is worth) would appear to show that all those of a school-going age are at school. On the other hand, there is no doubt that a certain number of children are growing up uncared for and untaught in the by-ways of big cities; and it is probable that the children of a school-going age should, in the case of this community, be reckoned on a higher percentage than fifteen, since a reasonable livelihood is possible for its members only if they pursue their studies to the age of seventeen or eighteen years. Nevertheless, previous calculations have probably erred on the side of pessimism owing to the omission of Bangalore schools from the figures and the inclusion in the figures of population of a military element that amounts to no less than one-fourth of the whole.

Expenditure.

564. The total expenditure, direct and indirect, on European institutions has risen from Rs. 36,04,759 in 1897 and Rs. 53,03,235 in 1907 to Rs. 65,24,645 in the last year of the quinquennium. Of this sum, direct expenditure accounts for Rs. 34,53,496 against Rs. 27,16,371 in 1907. The growth is large, but has been especially large under indirect expenditure. Here the increase is not in expenditure on buildings, etc. (which has actually declined):

but under the miscellaneous head, where it has risen from Rs. 13,05,198 to Rs. 23,63,776. Detailed figures in the Bengal report show the cause—a large expansion in boarding charges, due doubtless to increased numbers and a better standard. Out of a total expenditure in that province of Rs. 9,49,681 under the miscellaneous head, boarding charges account for no less than Rs. 6,33,894, while contingencies, etc., are responsible for Rs. 1,55,825.

565. As to sources of income, no less than Rs. 44,00,000 of the direct and indirect expenditure is derived from fees, subscriptions, etc., while Rs. 21,24,554 comes from public funds. But, by reason of the items included under indirect expenditure, this does not form an accurate criterion. It is necessary to consider direct expenditure. Of the direct expenditure upon each pupil in a European institution, one-third is derived from public funds, against one-half in institutions for Indians. The gratuitous services of a host of devoted teachers in denominational schools, especially those maintained by Roman Catholic orders, constitute a further private contribution of incalculable value. The annual tuition fee for a pupil in a European institution averages Rs. 38; for a pupil in an institution for Indians it averages Rs. 2. These figures testify to a considerable amount of private effort. But it is to be remembered that the majority of European pupils are educated in secondary schools—a fact which partly explains both the larger private contribution and the higher fee-rate. Also, the increase in recent years has been in provincial expenditure (aided by imperial grants). It has been mentioned that in 1876, government spent $1\frac{3}{4}$ lakhs on this kind of school. In 1897, the expenditure (both direct and indirect) from this source had risen to Rs. 7,75,000, in 1907 to Rs. 16,54,000, and in 1912 to Rs. 20,95,000. The variations in fee income are remarkable—Rs. 31,11,000 in 1897, falling to less than Rs. 16,00,000 in 1902, and gradually rising again to Rs. 24,69,000 in 1912. These figures include boarding as well as tuition fees; the variations are probably due to the omission of the former in some years. Subscriptions, etc., show slow but steady increase from Rs. 15,00,000 in 1896 to Rs. 17,62,000 in 1907 and to Rs. 19,31,000 in 1912.

566. Thus, while benevolence plays a solid and steadily increasing part in the education of this community, the direct cost to parents and pupils has fallen in the last fifteen years (though it displays a tendency to rise to its former level), and expenditure from government funds has greatly increased. A new impetus has been given to private effort by the formation of Sir Robert Laidlaw's Committee, which is now collecting funds for schools of all denominations except Roman Catholic schools. The great increase in state subsidies within recent years dates from the commencement of a liberal policy of imperial assignments. In 1906 the Government of India made a recurring grant of Rs. 2,46,000 in aid of this class of education. The objects specially recommended were the improvement of the pay of teachers, enhancement of grants for equipment and maintenance and provision of scholarships on a more generous scale. A recurring grant of Rs. 10,000 was also made to the Government of the Punjab for the maintenance of the training class at Sanawar. Early in 1911 a non-recurring grant of Rs. 6,57,000 was given. In 1912 new imperial assignments were made of Rs. 20,000 non-recurring and Rs. 3,70,000 recurring. These grants were distributed to provinces as follows :— *Imperial grants.*

Province.	1906.		1911.		1912.		Total.		Grand Total.
	Recurring.	Non-recurring.	Recurring.	Non-recurring.	Recurring.	Non-recurring.	Recurring.	Non-recurring.	
	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
Madras . . .	40,000	...	...	30,000	82,000	20,000	1,22,000	50,000	1,72,000
Bombay . . .	35,000	...	...	10,000	40,000	...	75,000	10,000	85,000
Bengal and Eastern Bengal and Assam.	70,000	...	...	1,67,000	1,19,000(b)	...	1,89,000	1,67,000	3,56,000
United Provinces .	50,000	...	...	2,00,000	47,000	...	97,000	2,00,000	2,97,000
Punjab . . .	37,000(a)	...	...	1,50,000	38,000	...	75,000	1,50,000	2,25,000
Burma . . .	12,000	...	...	50,000	31,000	...	43,000	50,000	93,000
Central Provinces and Berar.	12,000	...	...	50,000	13,000	...	25,000	50,000	75,000
TOTAL	2,56,000	...	...	6,57,000	3,70,000	20,000	6,26,000	6,77,000	13,03,000

(a) Includes Rs. 10,000 for Sanawar.
(b) Includes Bihar and Orissa and Assam.

If it is permitted to look beyond the quinquennium, we find that in 1913 yet other grants were made, aggregating Rs. 28,00,000 non-recurring and Rs. 3,00,000 recurring. Thus, apart from the grants of 1906, and apart from any increase in provincial expenditure, the imperial grants given in the past three years amount to £231,800 non-recurring and £44,666 annually recurring.

General position.

567. The features of the quinquennium have been a more generous treatment of the institutions designed for this deserving and useful section of the population, through the application of the new code of 1905 (some of the features of which will presently be described) and of liberal grants. Sir A. Bourne says of Madras, "Having in view the geographical distribution of the schools, which leaves no centre of European population without at least one, the operation of the provision in the code for the assisted education of children whose parents live in places where there is no school, and the activity of the orphanages, there is no reason to think that the supply of European education does not adequately meet the demand for it." Mr. Godley also writes of the Punjab :—

"The subject of European education in India has of late been attracting much attention, and somewhat sweeping assertions have been made regarding the inefficiency of the schools and the inadequacy of the government grants. Whatever may be the case in other parts of India, it would be a mistake to suppose that in the Punjab the problem has not been fairly dealt with in the past, or that there is present neglect. There is sufficient school accommodation for the comparatively small number of children, at any rate for girls. Thanks to the unstinted efforts of the nuns of the various orders, the members of St. Hilda's Society, and other devoted workers, and also to liberal assistance from government, education is attainable at a very moderate cost. There is no class of European or Anglo-Indian children in the province growing up without education for want of school facilities. Poverty or improvidence of parents may cause hardship in individual instances; such cases, however, occur in every country, and can only be satisfactorily provided for when the concessions offered by the state system of education are supplemented by private charity. Relief of this kind is afforded in the Punjab by the Anglo-Indian Children's Relief Association, the Punjab Masonic Institute, and by indigent grants from government. Money could doubtless be devoted with advantage to improving the school staffs and the quality of the teaching, but a pessimistic view of the future of European education in this province does not seem to be warranted by facts."

Conference of 1912.

568. The problem, however, is one of such importance to a community, small in size, but for whose very existence the present form of government is responsible, that it was deemed advisable to hold a representative conference in Simla in 1912, which is hereafter referred to as the conference of 1912. This conference was presided over by the Hon'ble Sir Harcourt Butler, Member for Education in the Viceroy's Council. There were in addition thirty-nine representatives of all interests, including the Bishops of Bombay and Lahore, the directors of public instruction and persons engaged in active educational work in schools of different denominations. The Hon'ble Mr. Sayid Ali Imam, Law Member of Council, and the Most Reverend Archbishop Kenealy also attended some of the sessions. Many important and practical resolutions were passed. Those which called for most urgent treatment dealt with the subjects of extension of education to children who do not now attend school and the improvement of the pay and prospects of teachers. Others dealt with the grading of schools, the training of teachers, the foundation of a college for Europeans, grants-in-aid, examinations and certificates, scholarships, and medical inspection and supervision. Some of them are noticed in detail in the last section of this chapter.

III.—Institutions.

Management.

569. Out of the total of 390 institutions for Europeans, only twelve are maintained by government; 356 are aided; 22 are unaided. The schools are generally managed by religious bodies. Those maintained by government, by committees, by railway companies and by private individuals are undenominational. It has been estimated that about fifty per cent. of the children at school are educated in Roman Catholic schools. In Bengal, for instance, the pupils are distributed as follows—in Roman Catholic schools, 55·89 per cent; in Church of England schools, 16·34 per cent; in Non-Con-

formist schools, 6·0 per cent; in Church of Scotland schools, 3·55 per cent; in schools under Jewish management, 1·7 per cent; in government schools, 3·5 per cent; and in schools under other undenominational management, 13·0 per cent. In Bombay we find that 43 schools are Roman Catholic, in 33 the pupils are brought up in the Church of England, and ten are managed by other Protestant bodies.

Concentration.

570. Where educational institutions are of a denominational character, overlapping is inevitable. The existence of overlapping is mentioned in five of the provincial reports. In Madras and the Punjab this has been to some extent remedied by the amalgamation of higher schools. In the latter province the ideal is that secondary education should be given as far as possible in boarding schools in the hills, while schools in the plains should be of the primary type, save at Lahore. Though Mr. Godley says that the ideal is not likely to be fulfilled in the immediate future, a certain amount has already been done by abolishing the higher classes in some of the plains schools. The general question was considered by the conference of 1912 and a resolution was passed urging the desirability of concentration.

Colleges.

571. In 1907 Mr. Orange remarked that there were attached to the schools for general education fifteen college departments giving a so-called university education, but that only four of these were affiliated nominally to a higher standard than the intermediate in arts, and that none, in fact, amounted to more than being the top class of the school, in which a little special teaching was given for the university intermediate examination. "It is extremely doubtful," he wrote, "whether the universities will permit the continuance of the affiliation of these classes, especially as in the majority of these schools the college departments contain no pupils." The prophecy has been fulfilled. Only six of these collegiate classes survive—one in Madras and five in the United Provinces, four for women and two for men. The number of their pupils is 37 against 59 five years ago. This, however, does not represent the total number of European students reading in arts colleges. More read in institutions for Indians than in these so-called colleges for Europeans. The total is 208 against 150 in 1907. The question of establishing a college specially for Europeans was debated at length at the conference of 1912. A considerable body of feeling was in favour of a separate and self-contained course for Europeans from start to finish; and, notwithstanding some weighty opinions to the contrary, the conference recommended the establishment of a separate university arts college affiliated to a western university or conferring its own degrees; in default of this, graduate courses in arts and science attached to a training college for teachers—such as (see paragraph 597) has been proposed at Bangalore. The erection of hostels for members of the domiciled community in connection with existing colleges for Indians was also advocated.

Schools.

572. It is unnecessary to speak here of the ordinary schools. Their organisation will be described later on. It will suffice to notice that nearly all are of the secondary grade. There are 124 high schools and 149 middle schools; these taken together contain 28,904 pupils. Primary schools number only 77 and their pupils 3,527. An education ending at the primary standard is regarded as of little use for this community, though good institutions of the elementary grade have been established in Bengal.

Professional training.

573. Professional training is given mainly in colleges for Indians. Sometimes, as in the engineering colleges at Sibpur and Roorkee, special facilities are offered to Europeans. The total number reading in professional colleges is 333 against 338 in 1907 (see supplemental table 198). The number reading law remains insignificant. There has been a decrease of those in engineering colleges counterbalanced by an increase in medical colleges. The decrease at Sibpur is deplored by the principal as a loss to the college; he considers the excellence of the training and the ease of finding employment are not realised. The total of male professional students has slightly increased; that of women has fallen from 74 to 57.

Industrial training.

574. The number of industrial schools has risen from five to fourteen; those classed as 'other schools' have fallen from twenty-one to ten (see supplemental table 192). Pupils undergoing industrial and technical education

have risen from 167 to 525. Among these institutions may be mentioned St. Aloysius' School at Vizagapatam, which has excellent buildings and plant; the sub-overseer classes at the Victoria School, Kurseong, the Jamalpur and Kharagpur night schools for railway apprentices, and the Calcutta Technical School; the night schools for apprentices of the Oudh and Rohilkhand and the Great Indian Peninsula Railways; and the industrial class at St. Francis de Sales' School at Nagpur. In commercial schools the numbers have risen from 106 to 258, the increase being almost entirely among girl pupils. The largest institutions are the commercial classes attached to the Y. M. C. A. and the Y. W. C. A. in Calcutta.

A certain amount of industrial training is imparted in the general course (*e.g.*, in the higher elementary schools of Bengal) or in classes attached to ordinary institutions. Thus, the Lawrence Asylum, Ootacamund, has a telegraphic class; that at Sanawar and the Lahore Cathedral Orphanage have carpentry classes; the Boys' Orphanage at Lahore has commercial classes. Band music is taught in the Lawrence schools; and there is also a special school of this subject for Europeans in Madras. Domestic economy is taught to girls at St. Helen's Convent in Bengal and elsewhere. The Oak Grove School, Mussoorie, maintained by the East Indian Railway, has excellent technical and domestic science classes, of which an interesting account is given in the latest report on the schools of that railway. Special mention will presently be made of the Woodburn Cottage Homes, Kalimpong.

Numbers under special instruction.

575. As regards professional and technical and industrial education in general, the total number of pupils under such instruction has decreased from 1,833 in 1907 to 1,631, out of which nearly half are women. The contraction is not explained in the reports, but may possibly be due to some change in classification, since a remarkable drop has occurred in those shown as enrolled in other schools. Decrease has also taken place in the numbers in medical schools. The total number undergoing these forms of instruction is by no means insignificant when the strength of the total community is considered. The following passage from the report of the United Provinces is worth quoting in this connection :—

> "The night school for European and Anglo-Indian apprentices of the Oudh and Rohilkhand Railway has acquired a separate building of its own and has made additions to its equipment and furniture. Its work has been satisfactory and well organized, but its enrolment has fallen gradually during the quinquennium from 52 to 30. The reason given is that not sufficient applicants with the required educational qualifications were forthcoming. The inspector says: 'More apprentices would have been taken on, if more well educated lads had offered. The small number of comparatively well educated lads offering was rather surprising, considering the good prospects before a clever, well educated lad with character and common sense who knows his work. Such men are constantly required in the higher branches and cannot always be found.' This is an illuminating fact in view of the general complaint of the paucity of openings for Europeans in India."

Orphanages.

576. There are a fair number of orphanages for the education and upbringing of waifs and strays and children of the indigent. Here the various missions, assisted by special grants under the code, do admirable work. The Bengal report specially mentions Canon Jackson's school in Scott's Lane, the schools of the Loreto Nuns and the free day and boarding schools of the Christian Brothers. These are in Calcutta. At Kalimpong, in the Himalaya, are the well known St. Andrews' Colonial Homes of the Church of Scotland Mission managed by Dr. Graham. The children are got hold of when young, carefully trained among healthy surroundings and in good climate and brought up to useful employment. There are 343 children in residence. Subscriptions and legacies to the homes have totalled just under five lakhs in the past quinquennium; while the government grant and fees average each about a quarter of a lakh per annum. The children are accommodated in separate houses. In the Woodburn Cottage Homes there are agricultural and technical classes. The girls have domestic training throughout. No domestic servants are permitted; all household work is done by the children under the guidance of the supervising bodies. There is also a regular class for training children's nurses. During the quinquennium, an Assam Cottage was added to the houses at Kalimpong. Here 32 boys

are educated. The subscriptions raised in Eastern Bengal and Assam towards the maintenance amounted to over Rs. 8,000 in 1910-11. As Mr. Prothero remarks, India wants more Kalimpongs.

IV.—Special features.

577. It is a peculiarity of European schools that they are organised under a code substantially the same for all India. This code is the outcome of the conference of 1901, and of the recommendations of the Hill Schools and Mr. Pope's Committees previously mentioned. It was circulated to Local Governments and finally published in 1905, for adoption with such modifications as the circumstances of each province might require. These modifications were contingent on the approval of the Government of India; but this restriction has been removed during the present quinquennium and Local Governments can now make alterations without reference save where the alterations proposed appear to constitute a fundamental departure from the principles on which the code is constructed. The features of the system can best be studied in the light of its regulations and the changes effected during the quinquennium. In some respects provinces have naturally drawn apart in their adaptation of principles. But the chief characteristics remain. On the whole, says Mr. de la Fosse, the new code has proved a success. The inspector of European schools in Bombay also notices that it has produced good results and more sensible methods. *The code.*

578. In order to receive scholarship-holders, to present pupils for departmental examinations and to obtain other benefits, it is necessary that European schools, even if unaided, submit to inspection, prove their necessity and their financial stability, possess a properly constituted managing body and abstain from injurious competition in the matter of fees.* *Recognition of schools.*

579. The standard classification laid down in the code comprised primary, middle and high schools or rather stages. The first stage ordinarily contains one or more infant classes and four standards; the second, three standards; the third, two or more standards leading up to the final examination. Thus the school course is one and unbroken—a series of nine, ten or more standards from bottom to top. Two notable modifications have been introduced during the quinquennium, the one intended to offer a bifurcation at an early stage and thus to provide a complete course for those whose school career must perforce be of minimum duration; the other calculated to offer alternative courses in the high stage for those who seek a professional or a business career. *Classification of schools.*

580. The former change took place in Bengal as the result of a committee which sat in 1910. The elementary school in Bengal now offers a complete course—that is, it contains an infant stage and six standards, intended to cover nine years up to the age of fourteen. The fourth standard corresponds with the preparatory stage in a secondary school; this permits of transition to the latter at the age of twelve; transition is also possible (though less convenient) from the fifth and sixth standards. Thus from the age of twelve to that of fourteen a pupil has two alternatives—he may transfer himself to a secondary school, or he may remain in the elementary school, undergo a complete course and obtain a certificate. Furthermore, if he then desires to continue his studies on strictly practical lines, he can proceed to a higher elementary school. These institutions are few in number. They provide higher general and supplementary courses—commercial, industrial, agricultural and domestic. They carry a pupil on to his seventeenth year when employment becomes possible. "The scheme of instruction laid down for these classes," writes Mr. Prothero, "while providing for a continuation of the general education of the pupils, is of an eminently practical nature and is much better suited for boys and girls who have to leave school at a comparatively early age in order to make their living than the corresponding course in a secondary school leading up to the junior Cambridge local. Though regarded at the beginning with grave suspicion—partly as forming a new departure and partly on account of the designation, *i.e.*, higher elementary—they are gradually winning their way into public

* Fifth Quinquennial Review, page 271.

favour and have already elicited the approval of those who are acquainted with the educational wants of the poorer classes of Anglo-Indians." Madras also has instituted a middle course complete in itself for those who do not seek a high school examination.

581. As to the second change, Bengal has re-classified her secondary schools. As a corollary of the modification just described, the middle stage has ceased to exist, and instead we have the secondary and higher secondary. The former prepares for the Cambridge junior local; the latter for the senior. This change may be regarded as mainly the effect of an alteration of the examination system. In Madras and the United Provinces it has been recognised that a single type of high school affords insufficient scope for differentiation. In Madras considerable elasticity is now permitted. Three alternative courses are there provided for middle schools, two of which lead on to two different types of high schools, while the third is for those pupils who are not likely to proceed beyond the middle standard. The two types of high schools prepare, the one for the university and the liberal professions, the other for business life. Sir A. Bourne remarks of the arrangements, " This attempt at differentiation has not elicited much response from the schools. Practically all of these are maintained with mixed aims and they are not large enough nor sufficiently well-staffed to have classical and modern sides. The courses of study are still for the most part those which were stereotyped by the matriculation examination." In the United Provinces it has been decided to adopt two staple curricula, one literary and one scientific, the bifurcation beginning at the middle stage. The conference of 1912 adopted a resolution with similar aims—namely, that the majority of high schools should teach a more modern and practical curriculum while a few should be termed collegiate schools and prepare for the university and liberal professions, the decision as to the character of each resting with government.

Courses.

582. The code laid down courses for the primary and middle standards. These must be distinguished from the subjects prescribed for examination, which do not always cover the full course. The subjects of the course are divided into compulsory and optional. In *the primary school* the compulsory subjects are English, arithmetic, geography, object-lessons, kindergarten, drill and (for girls) needlework, the optionals are Latin, French, German, vernacular, drawing and singing. In the *middle school* the compulsory subjects are English, arithmetic, geography, history, object-lessons and drill, with (for boys) algebra, Euclid and mensuration, and (for girls) domestic economy and needlework; the optionals are Latin, French, German, vernacular, physics, physiology, drawing, singing and manual training. The subjects laid down for *high schools* are those prescribed for the high school examination; here the pupil takes English and arithmetic as compulsory, and may also take not more than seven out of a list of eighteen optionals; choice however is restricted by the rule that boys must take algebra, Euclid and a second language among the optionals, and girls must take domestic economy.

Changes in courses arising out of different causes.

583. Such was the course as laid down. But it was realised from the outset that defects are unavoidable in drafting rules applicable to all classes of schools in all provinces.* The Government of India expressed their opinion that it would be necessary to amend the code in the different provinces after considering the needs of typical groups of schools; and they invited modifications. The curricula outlined required and have received definition by means of syllabuses. Reclassification of institutions and the prescription of new examinations have served to bring about changes to which allusion has already been made or will be found in the succeeding paragraphs. On the whole, the changes effected may be regarded as due to (*a*) provincial requirements, (*b*) the failure to distinguish between courses in the middle stage for those who will conclude their studies at an early age and for those who will continue them, (*c*) a similar difficulty in the high stage, which, while permitting excessive choice of optionals, provides no organised bifurcation for those who would pursue a business career and those who propose to proceed to the university, (*d*) alterations in the examination system.

* Fifth Quinquennial Review, page 274.

584. The standard curriculum, with slight internal changes, was adopted in Madras, the United Provinces, the Punjab, Eastern Bengal and Assam and the Central Provinces. Bengal modified the classification of schools as already described. In 1910 Eastern Bengal and Assam followed its example. Madras and the United Provinces have since adopted or decided upon a bifurcation in the middle and high stages. Bombay and Burma prescribed courses of study different in some essential points from the model and suited to their special requirements. In Bombay, the primary course omits kindergarten as a separate subject (while insisting on it as a method of instruction—surely a wise departure) and drill and adds history and drawing as compulsory; object-lessons are also omitted, but observation lessons may be given. That for the middle omits mensuration, object-lessons and drill, makes practical geometry compulsory for all, Latin compulsory for boys, and (besides needlework, which remains compulsory) allows girls to choose two out of three subjects—(1) domestic economy, (2) algebra and geometry, (3) Latin, French or a local vernacular. The optionals, of which one at least must be taken by boys and one only may be taken by girls, are also slightly different. The high course compulsory subjects are:—for all, English, arithmetic, geography, English and Indian history; for boys, algebra and geometry, Latin or elementary science; for girls, two of the following—(1) domestic economy, (2) algebra and geometry, (3) French, Latin, or a local vernacular or elementary science. There are also optionals, of which at least one may be taught; they include commercial instruction. In Burma the revision was undertaken by a sub-committee in which heads of institutions participated, and after consideration by the Education Syndicate and the department was adopted by government in 1909. Mr. Covernton thus describes the changes:— *(a) Provincial requirements.*

"The new courses for boys comprise compulsory, optional and additional subjects. Compulsory subjects are those in which a pupil must pass; they include English, arithmetic, geography, mathematics, English history and a second language. Optional subjects are another language, science, higher English, higher mathematics, history of India; one optional is required in the middle stage and two in the high stage. Additional subjects do not count toward a pass; they comprise drawing, singing, object-lessons, shorthand and typing, manual instruction, drill and hygiene, the teaching of the last two being obligatory. The girls' curriculum follows a similar three-fold division of subjects, but includes subjects suited to the need of girls, *viz.*, needlework, dress-making and domestic economy. A second language is not compulsory for girls, but on the other hand they have to take more optionals than boys do."

In this connection may be mentioned the controversy which centres about the compulsory prescription of Latin and a vernacular, which was strongly advocated by the Hill Schools committee. Bombay has Latin as compulsory for boys in the middle scholarship examination; Bengal insists on instruction in Latin. Bengal also insists on the study of a vernacular in both primary and secondary schools; the Central Provinces alone prescribes a vernacular as a compulsory examination subject at the middle and high stage. Elsewhere these subjects are not compulsory. The question of vernaculars was debated at the conference of 1912, when the utility of the knowledge of a vernacular was urged on the one hand, the practical difficulty of teaching it, the ease of acquiring it out of school and the inadvisability of placing any obstacle in the way of instruction in Latin were put forward on the other. No conclusion was attained; and perhaps the question is essentially of a provincial character. But it is interesting to note that an attempt is being made in the military school and training class at Sanawar to put the teaching of Urdu on a scientific basis.

585. Bengal has recognised the desirability of affording alternative courses for those who will leave school as soon as they can enter a calling and for those whose means or intelligence justify a continuance of study. The system has already been described whereby a boy can effect easy transition (preferably at the age of twelve) to a secondary school or continue in an elementary school and proceed to higher elementary classes. The course in these classes consists of two parts—*first*, general subjects, comprising English literature and composition, arithmetic (with special attention to application and practice in expertness of calculation), the keeping of ordinary accounts and drawing; *second*, one or other of the four supplementary courses, *viz.*, *(b) Early bifurcation.*

commercial, industrial, agricultural and domestic. As examples, the subjects included in the two last may be recited. The agricultural course requires a study of mensuration (with reference to land measurement and surveying); elementary agricultural botany, chemistry and geology; newspaper market reports; and the repair of agricultural implements. The domestic course comprises cookery and general household management; dress-making, embroidery and lace-making; sick-nursing and dispensing.

(c) Later bifurcation.

586. The bifurcation of middle schools in Madras (already described) partially belongs to the category of changes described in the preceding paragraphs, since it offers a complete course for those who will proceed no further. The bifurcation of high schools in that presidency and in the United Provinces, as well as the resolution adopted by the conference in favour of this modification, has been described in connection with the classification of schools. Of the causes which led to this decision in the United Provinces and of the nature of the proposed remedy, Mr. de la Fosse writes :—

"The courses of studies in the code are considered too elastic and the number of 'soft options' in the high school examination has attracted adverse remark. The department has been in consultation with school authorities during the greater part of the quinquennium with a view to devising courses which shall meet all needs and yet supply a solid grounding and a liberal education. The task has been one of extreme difficulty and has meant an immense amount of labour and thought in reaching finality. The work is now at last complete and the heads of important institutions have signified their readiness to introduce the new scheme of studies. Briefly, it has been decided to adopt two staple curricula: one literary and one scientific, the bifurcation beginning at the middle stages; greater importance is attached to the vernacular, and optional courses have been framed to meet the needs of girls. These curricula have not been prescribed for universal use, but are to be treated as 'specimen courses' indicating the standard and arrangement of studies which schools should follow; for one of the objects of the revised system is to give schools greater freedom in planning their own curricula. The authorities are at liberty either to adopt the staple curricula or to propose alternative ones for the approval of the department. Memoranda on the aims and methods of teaching the various subjects have also been drawn up for the guidance of teachers."

In Madras the effect of the experiment has been seen and is not reassuring; the schools remain mixed; and Sir A. Bourne notes "their comparative failure to study the real as opposed to the imaginary needs of their pupils and to adapt the training given to the former. They have in view far too much the few who may possibly get to the university and into the professions and far too little the many boys who must inevitably be content with a humbler career, and the many girls who must look forward to domesticity."

(d) Examination systems.

587. The high school course necessarily has in view the examination or certificate for which the pupil is prepared. The subject of examinations (including the effect upon the courses) is treated in the succeeding paragraphs.

Examinations.

588. Mr. Orange described the abolition, as essential tests, of the departmental examinations which used to conclude the primary and middle stages. The primary examination was retained only as a test for scholarships; the middle examination for the same purpose and for the attainment of a leaving certificate in the case of those who do not intend further prosecution of their studies. Nor is examination always regarded as a necessary means to the award of primary scholarships. Promotion is determined by teachers and managers, subject to the inspector's approval. (It is noticeable that the Madras report still speaks of examination qualifying for promotion at the end of the middle course.) In Bengal, where the elementary course presents an alternative complete in itself, a leaving certificate is naturally given at its conclusion. The examination is not regarded as satisfactory, partly owing to the want of syllabuses and a definite standard, partly owing to the difficulties attendant on the introduction of a supplementary oral and *in situ* test. It is hoped to remedy the former defect and to consider the question of the second. Elsewhere the only essential examination retained is that which closes the high school career. It is called the high school examination and comprises, as already stated, English and arithmetic, with a choice of not more than seven out of eighteen so-called optionals, of which three are obligatory for boys, and one for girls.

The standard examinations of the code were adopted in Madras, Bengal, the United Provinces, the Punjab and Eastern Bengal and Assam. Other provinces introduced local variants, some of which (with reference to Latin and a vernacular and in the case of Burma) have already been noticed. But the desirability of instituting a test which would carry recognition in England and other countries, perhaps also the glamour attaching to an external examination conducted by a university, have wrought a change. In various provinces the Cambridge University preliminary, junior and senior examinations, or the Cambridge junior and senior school certificate examinations are ousting departmental and other tests. The change has been most marked in Bengal, where in 1911, the junior and senior locals were used as the regular test for secondary schools—the former at the conclusion of two standards above the six elementary standards, the latter in higher secondary schools at the conclusion of a further two standards. In that year 88 out of 176 candidates were successful in the junior local, and 59 out of 115 in the senior local. The results would have been better had not the teachers, in the first year, been working more or less in the dark. Eastern Bengal and Assam followed the lead of Bengal; but the university has not yet recognised its schools. In Bombay the examinations are used as an alternative to the high school examination. In 1912, out of 71 candidates of that presidency for the junior local, 42 passed; and 12 out of 35 candidates for the senior.

589. No other province reports a similar change. While the Cambridge examinations are much appreciated in Bengal, the feeling does not appear to be universal. In the Punjab the department has offered for the past two years to arrange for holding the Cambridge senior locals; but no school has responded to the offer—whence it is inferred that the departmental examination commands confidence. A demand from school managers in Burma for the Cambridge locals, as ensuring a fixed standard and recognition outside India, has been by no means general; and Mr. Covernton considers that the average standard of courses in the high schools is superior to that required for the English examinations. Arguments of wider application have also been advanced against the adoption of the Cambridge tests. Among these, three are deserving of special attention. There are the disadvantages inherent in any purely external examination. There is the difficulty of combining with any such test the value which should attach to a school record. Finally, there is the danger (so strongly emphasised in the report of the Consultative Committee on examinations in secondary schools in England) of the school work being dominated and distracted by a multiplicity of aims. That this is no imaginary peril is testified in the Bombay report, where we learn that many pupils have to sit for the departmental and for the Cambridge examinations within a fortnight of each other. In this connection it should be stated that a few European schools likewise prepare for the matriculations of Indian universities though, with the more general recognition of equivalents, this practice is growing less frequent.

590. These difficulties were considered by the conference of 1912. The resolution in which their conclusions are embodied seeks to combine the advantages of a school record with those of an external examination carrying recognition in England. The certificates proposed, called the first school certificate and the leaving certificate, were to be granted partly as the result of the completion of a course over three years in the one case, and a further and subsequent two years in the other, partly on the passing of the Cambridge junior local or school certificate in the one case, and the answering senior tests in the other. Ordinarily a school would be compelled to make choice of the Cambridge locals or the Cambridge school certificates as the external test, and would not be permitted to prepare for both. The leaving certificates thus obtained should if possible be adopted as the passport to subsequent careers.

Scholarships.

591. It was stated in the fifth quinquennial review that scholarships of Rs. 8, Rs. 12 and Rs. 20 a month are awarded at the end of the primary, middle and high course. The rates have now been changed. Thus, in Bengal there are now 18 elementary scholarships of Rs. 12, four junior secondary of Rs. 12, six senior secondary of Rs. 20, three collegiate scholarships of Rs. 30, and two final scholarships of Rs. 40. These are for children of the domiciled com-

munity. In addition, scholarships tenable in European schools are awarded under the Bengal Code to Jews, Parsis and Armenians. In Eastern Bengal and Assam the primary scholarships have been raised to Rs. 12, the middle to Rs. 15.

592. In addition to scholarships tenable in European schools in India, there is a scholarship of £200 a year tenable for three or four years in England, which is annually awarded by the Government of India on the recommendations of Local Governments. This scholarship was established in 1907. Candidates must be not more than 22 years of age, must have studied for the two preceding years at a recognised school or college and must have passed the high school examination or its equivalent, or be graduates of an Indian university. The scholar is required to study at a university in the United Kingdom or, with special sanction, at a foreign university.

Grants-in-aid.

593. The committees which considered European education after the Simla Conference of 1901 were in favour of some form of salary grants. For various reasons the suggestion was not accepted. Instead, a system was introduced of ordinary grants based on attendance. But this is by no means the only kind of grant that can be earned. When it proves insufficient, a supplementary grant is permitted. Ordinary and supplementary grants may be converted into fixed grants. Special terms are offered for schools serving a sparse or poor European population or for schools recently started.

As regards the maintenance grant, the ordinary system is to allow annual grants, in the infant class of Rs. 20 for each of the first ten pupils, Rs. 15 for each of the second ten, and Rs. 10 for each of the remainder; in the primary section, Rs. 25 for each of the first twenty pupils, Rs. 20 for each of the second twenty, and Rs. 15 for each of the remainder; in the middle section, Rs. 40 for each of the first twenty pupils, Rs. 30 for each of the second twenty, and Rs. 20 for each of the remainder; and in the high section, Rs. 120 for each of the first five pupils, Rs. 90 for each of the second five, and Rs. 50 for each of the remainder. These are the rates (with slight readjustments in Bengal to suit the classification) in Madras, Bengal, the United Provinces, Eastern Bengal and Assam and the Central Provinces. In the Punjab the rates are preserved which are shown in the last review. These are slightly higher in the three lower sections than the rates just recited, but are much lower in the high section; consequently, they probably give a result more favourable to the schools. Bombay and Burma have adopted quite different systems. In Bombay there is no attendance grant; the ordinary grant is calculated at one-third of the expenditure as admitted by the inspector; and sometimes a supplementary grant is given equal to one-third of the ordinary grant. In Burma the ordinary grant is the difference between income and expenditure under limited conditions. Further, the system of salary grants, previously rejected on account of its complicated nature and for other reasons, is found in Burma, the United Provinces and the Punjab as a supplement to the principal grant system. Mr. de la Fosse speaks of the excellent results of salary grants.

In all provinces save Burma the ordinary grant may be enhanced by a supplementary grant; and both together may be converted into a fixed grant renewable every three years. There are special rates for places where Europeans are specially poor or few. Grants of Rs. 8 a month are given for orphans and destitute children. Cadet grants are given of Rs. 6 a year for each efficient and Rs. 8 for each extra-efficient. Special grants are offered for night schools. Building grants may be one-half or two-thirds of the total cost.

While the grant for orphans and destitute children is permitted in recognised orphanages and boarding schools, grants for free day scholars are no longer provided save in Bombay. This is considered to have proved a hardship in day schools which draw their pupils from poor localities. Another point, and one which was raised at the conference of 1912, is the existence, especially in Roman Catholic schools, of unpaid teachers belonging to religious denominations, and the desirability of taking their services into consideration in any scheme of salary grants or grants calculated upon expenditure. In the Punjab subsistence grants are permitted to such teachers.

594. The lack of trained teachers in European schools is everywhere deplored. The profession of teaching does not hold out sufficient attraction (as compared with other available careers) to induce men to enter it. With women the problem is less acute. There is only one class specially for training men—that at Sanawar, and only fifteen men are returned as undergoing training. There are nine institutions for training girls; and the number under training is 219. *Teachers and training.*

The reports show the following figures regarding certificated teachers :—

	Total number of teachers.	Number of certificated teachers.	
Madras	581	412	
Bombay	693	229	(including English-teaching schools).
Bengal and Eastern Bengal and Assam .	640	138	
United Provinces	396	173	
Punjab	200	139	
Burma	203	104	
Central Provinces	115	25	
	2,828	1,220	

Since not all the provinces have supplied figures, in a few cases the calculation has had to be made upon the data supplied to the conference of 1912; and for this reason it is not possible to show separate figures for Bengal and for Eastern Bengal and Assam. In those provinces and in Burma graduates have also been shown as trained teachers, since in the information then collected the two qualifications were regarded as more or less equivalent. In other provinces, however, this has not been done. As a means of correcting the discrepancy it may be added that from the figures collected for the conference it appears that in British India (including Bangalore) the total number of teachers was 3,005,* those with the B.A. or higher degree of an English or American university numbered 155, those with similar degrees of Indian universities numbered 104, those without any degree, but trained, numbered 1,006, and those with neither degree nor training numbered 1,680. No information was available in respect of 60 teachers. Unfortunately, the term ' certificated ' is not always synonymous with the term ' trained '; and again there is doubt regarding the various kinds of certificates. Owing to the latter fact the statistics minimise the number of qualified teachers, since they do not take account of the admirable training which is undergone by many of those who work in Roman Catholic schools. On this subject the Bengal report says, " To give a balance to this paucity of trained teachers it should be remembered that no fewer than 29 of the 71 secondary and primary schools are managed by the Jesuits, the Loreto nuns and the Irish Christian Brothers who are satisfactory teachers and who have passed the examinations of their own orders. Their pupils are uniformly successful at public examinations."

595. Of the ten institutions mentioned above, three are classed as of the collegiate grade. These are situated in the Punjab. But a more satisfactory classification is according to the sex of pupils. As already stated, the only institution for men is the training class opened at the Lawrence Military Asylum, Sanawar. The Hill Schools committee had recommended an institution at Allahabad; instead of this the Sanawar class was founded in 1907. It is under the Government of the Punjab; but the Government of India give Rs. 10,000 a year towards its upkeep, and pupils from any part of India are eligible for admission. There are fifteen stipends of Rs. 40 a month. The Local Governments which send students for training pay these stipends. The course is ordinarily of two years; but graduates or those who have had three years of experience of teaching, take a one year's course. The experiment was at first not very successful. The class is now doing good work and there are 15 students in residence, only four of whom are from the Punjab itself.

* The total exceeds that given above because it includes Bangalore (not included in the reports) and also certain assistants who can hardly be described as teachers.

The reports from some provinces, however, especially Madras, notice that students have hitherto been unwilling to proceed to Sanawar.

596. The institutions for girls are, in Bombay, the Clare Road Convent Training Class, St. Mary's High School, the Girgaum High School, and the Convent Normal class, Karachi. Bengal has a government institution—the Dow Hill Girls' School at Kurseong; the course is of two years; and there are ten pupils in each year. In the United Provinces there are the All Saints' Diocesan College, Naini Tal, and the Woodstock College at Mussooree. In the Punjab there is St. Bede's College at Simla; the Auckland House school at Simla likewise maintained a training class, but it was closed for want of pupils in the last year of the quinquennium.

597. The subject of training was fully discussed at the conference of 1912. Both present conditions and the hope of expansion appeared to justify a recommendation for a training college for Southern India, possibly situated at Bangalore, where those would be likely to resort who now hesitate to go to Sanawar. It was generally thought by the directors that the training of women should be left to private effort. A defect in some provinces is the want of facilities for secondary training. But the All Saints' College will soon be affiliated to the Licentiate in Teaching; and it is proposed to improve the staff at Dow Hill and add arrangements for secondary training.

598. The recital of the names of these institutions does not complete the account of training facilities, since pupils also attend the training institutions for Indians, and are sometimes lodged in separate hostels or convents. Thus, the Presidency Training School in Madras contains a class for secondary teachers—principally Europeans and members of the domiciled community. At Saidapet in the same presidency vacation classes have been held for teachers in European schools. They were not well attended, but the pupils profited by the instruction. Sir A. Bourne says, "The course in geography teaching attracted much attention; and in regard to history the work done since in the schools shows that it is ignorance of aim and method rather than ignorance of the subject that keeps the teachers back."

Inspection.

599. From 1903 Madras has had an inspector for European boys' schools and training schools for masters. As the work of the European schools became more exacting and since some of the inspectors found their efforts to improve elementary education impeded by their want of control over training institutions, the functions of this officer were changed. He retained the conduct of the teachers' certificate examinations and control of certain other general matters connected with training schools; but he relinquished to circle inspectors the inspection and much of the management of these institutions; and he undertook, in place of this, the inspection of most of the European girls' schools. Bombay, Bengal, the United Provinces, the Punjab and Burma have special inspectors of European schools. In the Punjab the inspector assists in the supervision of schools in the Lahore division and in the work of the director's office. The Burma inspector also looks after normal schools. The Central Provinces has hitherto shared the services of the Bombay inspector, but will now have its own inspector of European schools, who will also perform other duties. Thus the desirability of maintaining a special agency is generally recognised. The difficulty is to arrange for a single officer to occupy the post for a period sufficiently long to give him a thorough knowledge of the schools and of a condition of affairs which is very different from that obtaining in other educational institutions.

Photo-Mechl. Dept., Thomason College, Roorkee.

MUHAMMADAN ANGLO-ORIENTAL COLLEGE, ALIGARH.

Photo.-Mechl. Dept., Thomason College, Roorkee.

HOSTEL, MADRASSA-I-AZAM, MADRAS.

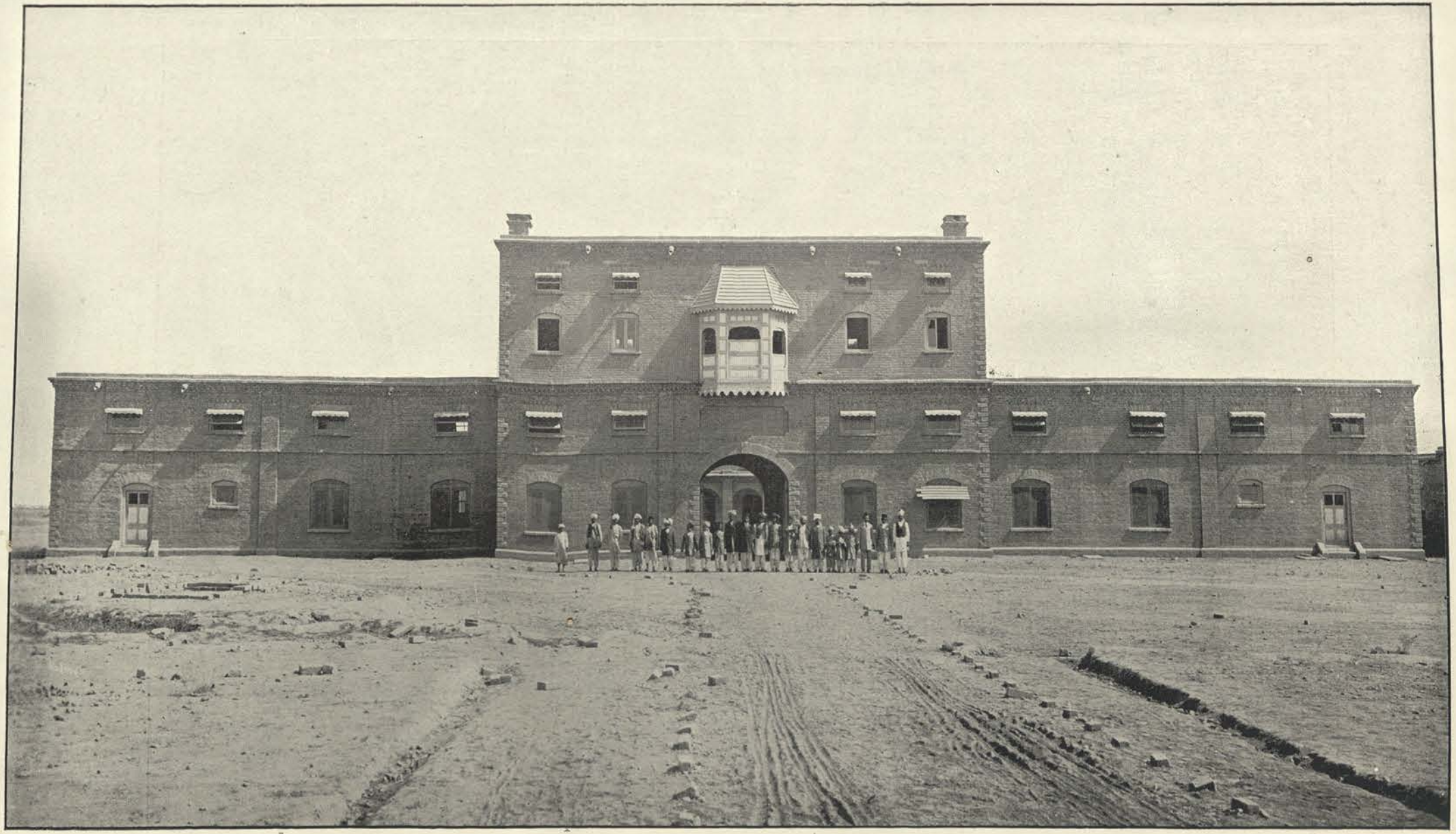


Photo.-Mechl. Dept., Thomason College, Roorkee.

BUTLER HOSTEL, ISLAMIA COLLEGE, PESHAWAR.

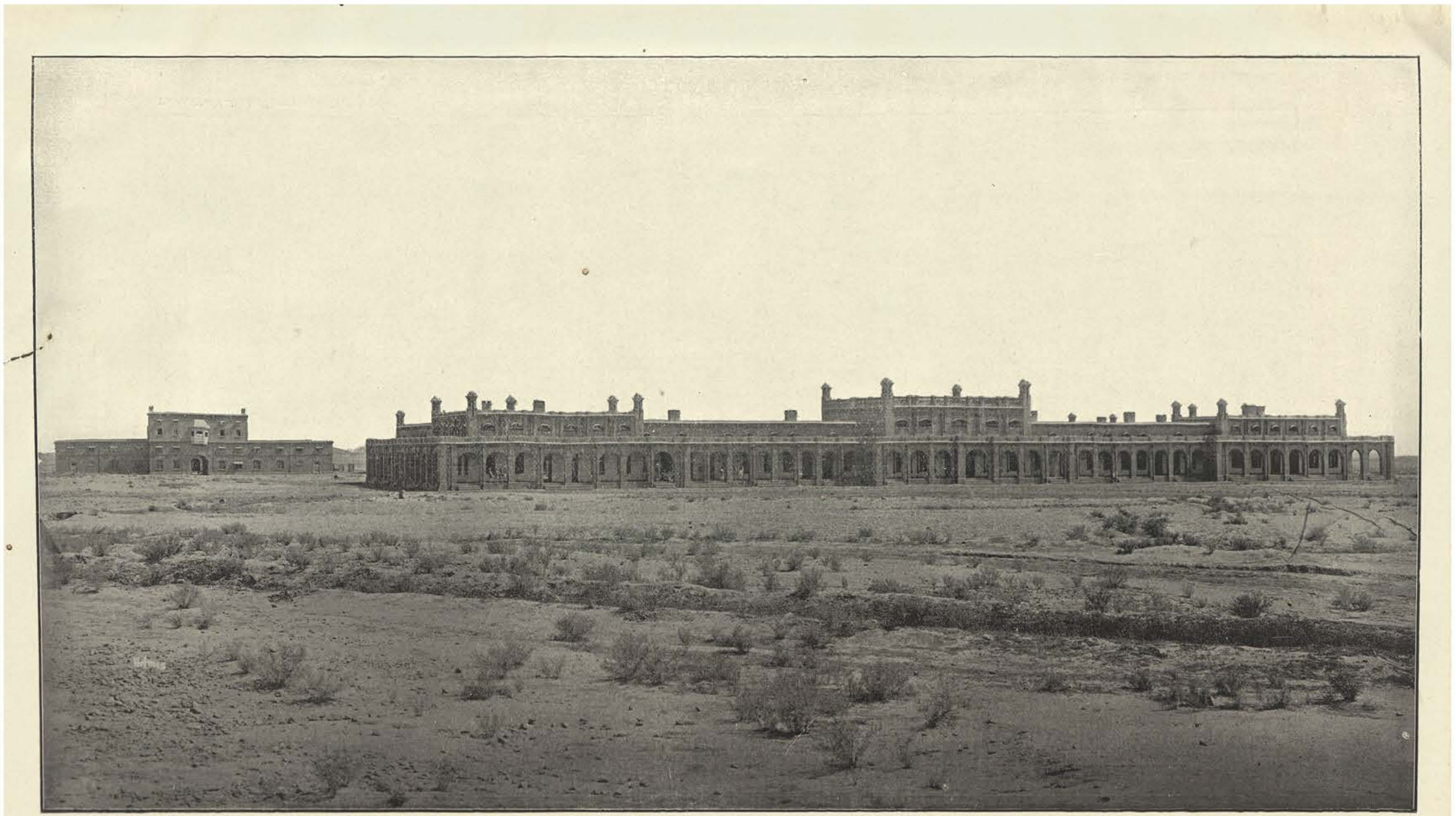
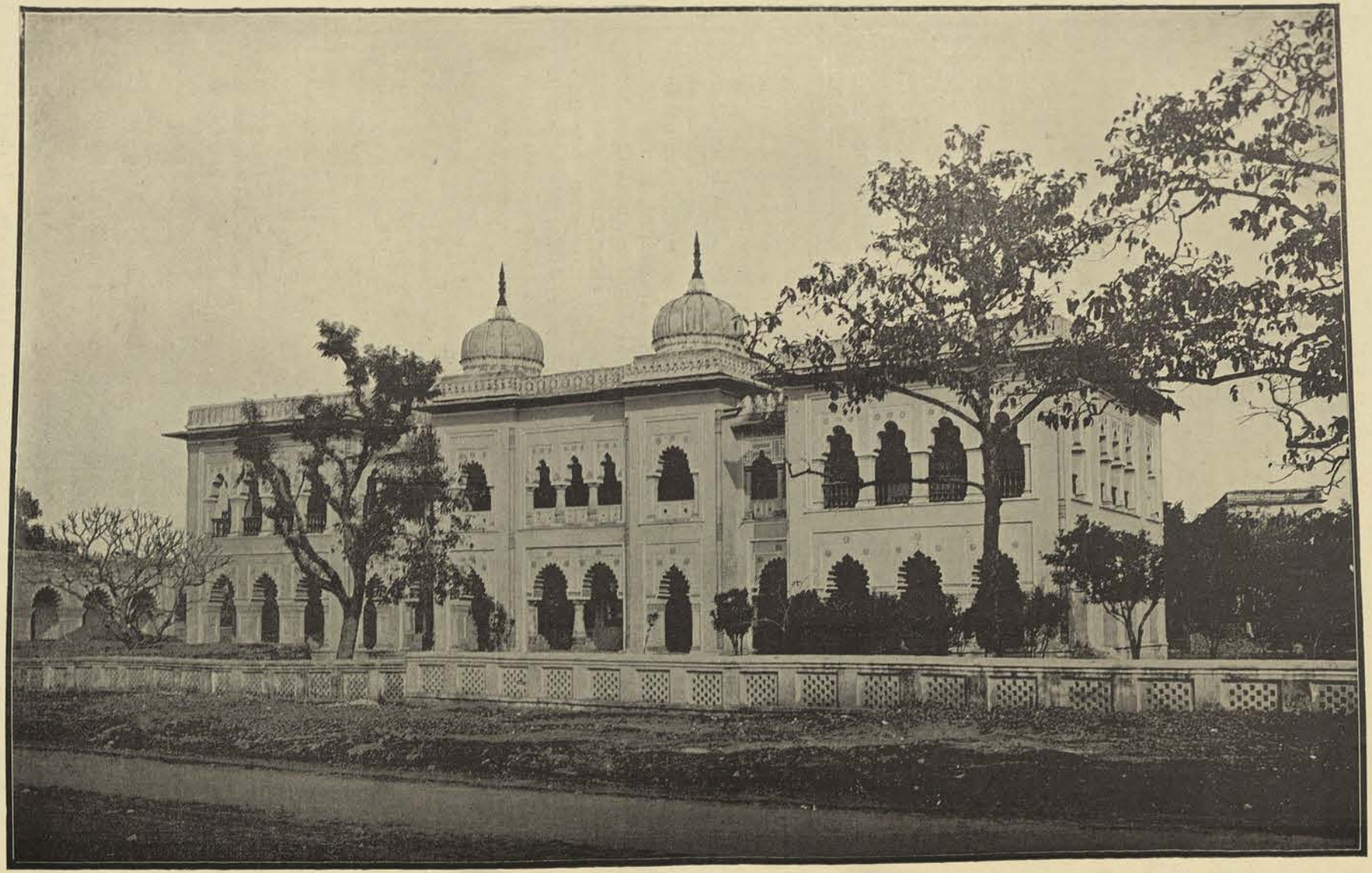


Photo.-Mechl. Dept., Thomason College, Roorkee.

ISLAMIA COLLEGE, HIGH SCHOOL, PESHAWAR.



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DACCA MADRASSA.

CHAPTER XVI.

EDUCATION OF MUHAMMADANS.

I.—Attitude of Muhammadans towards education.

600. The Muhammadan population of British India comprises 57,950,000 souls—22·7 per cent. of the total population. It thus forms a large minority, differing from the rest of the community in religion, tradition, ideals, manners, the language of its sacred and classical literature, and the readiness with which it has acquiesced in the prevailing educational system. Its needs require special measures; and the account of its progress demands separate treatment. The present chapter deals with the attitude of Muhammadans towards education, the general advance made during the quinquennium, the means taken to encourage the entry of their youth into institutions for instruction of all classes and the characteristics of their special schools. *Removal of difficulties.*

601. The chief point about the Muhammadan community is that, while the obstacles it encountered in elementary instruction have been successfully removed,* it is still very backward in the field of higher education. It had long lagged behind the Hindu population and has much lee-way to make up. When the control of the country passed from its Muhammadan conquerors and later when Persian ceased to be the language of the courts, the Muhammadan showed himself less ready than the Hindu in adapting himself to the new conditions. He did not seize the opportunities offered of western education or of entry into public life. He sat apart, wrapped in the memory of his traditions and in the contemplation of his ancient literature and bygone systems of science. Not only did his religious tenets often actually appear to forbid him the learning of English, but the obligatory study of the Koran and (in certain areas and among certain classes) the almost equally obligatory study of Urdu, Persian and to some degree of Arabic, retarded individual progress in education. "In the case of a young Muhammadan, the teaching of the mosque must precede the lessons of the school. He enters school later than the Hindu. He must commonly pass some years in going through a course of sacred learning before he is allowed to turn his thoughts to secular instruction. The years which the young Hindu gives to English and mathematics in a public school, the young Muhammadan devotes in a *madrassa* to Arabic and the law and theology of Islam."

602. These difficulties are gradually disappearing. The new feeling which has arisen among Muhammadans towards both elementary and higher education is evinced in rising numbers and in the formation of the All-India Muhammadan Anglo-Oriental Educational Conference, with a standing committee and provincial associations. The steady efforts made by government to ameliorate the lot of a somewhat backward section of the population are more and more appreciated. The attitude of the leaders of the community to education (including western education) is more and more favourable—provided always that religious instruction is not neglected. The advance has been more than initiated. The problem that now faces the Muhammadan is the maintenance of religious observance and discipline amid the disintegrating influences of higher secular education.

II.—Progress during the quinquennium.

603. The number of Muhammadans under instruction in all classes of institutions is 1,551,151 against 1,172,371 in 1907. (See supplemental tables 214 and onwards.) This increase represents nearly 32·3 per cent. on the previous figure against 25·8 per cent. in the case of pupils of all classes in India. This in itself is strong testimony to the advance they have made. Indeed, the *General increase of pupils.*

* In the districts which he visited, Mr. Adam found that Hindus were to Muhammadans in the proportion of rather more than two to one, but Hindu pupils in the proportion of about eighteen to one Muhammadan pupil. (*The Calcutta Review*, Volume II page 323.)

percentage of Muhammadans at school to the total of pupils of all creeds at school now just exceeds the proportion of the Moslem population to the whole population; the latter is 22·7 per cent., the former is 22·9 per cent. In some localities the percentage at school considerably exceeds the percentage of Hindus; thus, in the United Provinces, 13·4 per cent. of the Muhammadans of a school-going age are under instruction, and 9·3 per cent of the Hindus. Of the total number at school, 1,337,954 are boys and 213,197 are girls. This latter figure is noticeable as representing an increase of over 75 per cent. upon the number of girls at school in 1907. That the figure of literacy is low among Muhammadans as compared with Hindus is largely due to the fact that education has made rapid strides in the former community during the past ten years, and its effects are not yet fully shown.

604. Thus the Muhammadans now fully hold their own in educational institutions regarded as a whole. But it has often been remarked that they seek instruction in Koran schools which are resorted to for religious rather than educational purposes and that, though they have begun freely to frequent primary schools, they do not pursue their studies into secondary or collegiate institutions. This is due to their religious instincts, their poverty and the indifference which they have generally manifested towards western education. The second two of these obstacles have been partially removed by the application of special scholarships and the awakening of the community to an interest in higher instruction. It is to be remembered that over large areas the Muhammadans are included mainly in the cultivating classes who only proceed to secondary schools in exceptional cases. Nevertheless, progress has been greatly accelerated in the past five years. In the first place, while Muhammadans continue to patronise private institutions in numbers quite out of proportion to their strength in the population, the pupils so studying have decreased since 1907 from 248,470 to 234,153. On the other hand, those in public institutions have increased from 923,901 to 1,316,998, or by 42 per cent. The increase is to be accounted for partly by a greater influx into secular schools, partly by the transfer of Koran schools and *maktabs* (not necessarily at the sacrifice of their religious character) to the list of public institutions. In the second place, while the increase among those in primary school pupils has been comparatively small, the increases in arts colleges and in secondary schools represent not far from a doubling of the pupils, while that in special schools has more than trebled. In professional colleges (save those for the study of law) there has been no decided increase—indeed, there has in some cases been retrogression. Among special schools, those for training as teachers and those for technical and industrial instruction exhibit increases of Muhammadan pupils in the one case from 1,102 to 2,104, and in the other from 1,488 to 2,520; but the great advance in the numbers enrolled in special schools as a whole in reality represents enhanced numbers in *madrassas* and the transfer of *maktabs*, etc., to this class of institution.

605. The increases in *public* institutions are tabulated below :—

Class of institution.	Number of Muhammadan pupils in		Percentage of increase.
	1907.	1912.	
Arts Colleges	1,569	3,095	97·3
Professional Colleges	471	664	41·0
Secondary Schools	70,614	133,527	89·1
Middle Vernacular Schools	35,375	37,754	6·7
Primary Schools	787,173	1,022,768	29·9
Special Schools	28,699	119,190	315·3
TOTAL	923,901	1,316,998	42·5

Accordingly the increase has not been in numbers alone. A far larger proportion of Muhammadans now seek higher forms of instruction than

previously. The totals, however, are still low in institutions other than primary, when compared with those of all creeds. This is shown below : —

Class of institution.	Percentage of Muhammadan pupils to the total number of pupils of all creeds in various classes of public institution.	
	1907	1912
Arts Colleges	8·1	10·4
Professional Colleges	7·5	10·0
Secondary Schools	14·0	19·0
Middle Vernacular Schools	16·8	17·0
Primary Schools	20·0	20·5
Special Schools	42·1	66·2
AVERAGE	19·5	21·5

The lee-way to be made up in secondary and collegiate education is particularly noticeable. But, as a sign of improvement, it is to be observed that in Bengal ten Muhammadans passed the M.A. in 1911-12 against five in 1906-07; 40 graduated against eleven; 106 passed the intermediate against 54; and 261 the matriculation against 123. In Eastern Bengal and Assam, fifteen graduated against one in 1906-07, 73 passed the intermediate against twelve, and 296 the matriculation against 95, while the number in arts colleges rose from 71 to 360.

606. The following table demonstrates the percentage of Muhammadans to the toal population in different provinces and the percentage of Muhammadan pupils to all pupils in public institutions :— *Comparison with other communities.*

Province.	Percentage of Muhammadan population to total population.	Percentage of Muhammadan pupils to total of pupils of all classes in public institutions in	
		1907.	1912.
Madras	6·6	8·8	9·0
Bombay	18·1	16·4	16·6
Bengal	17·1	13·9	17·4
United Provinces	14·1	14·6	15·2
Punjab	54·8	39·1	38·3
Burma	3·5	3·0	3·6
Eastern Bengal and Assam	58·5	48·7	52·0
Central Provinces and Berar	3·7	9·1	9·3
Coorg	7·5	4·4	3·2
North-West Frontier Province	92·8	63·2	63·1
AVERAGE	22·7	19·5	21·5

With the addition of private institutions, the total percentage would be 22·9. In Madras, Bengal, the United Provinces, Burma and (especially) the Central Provinces, the proportion to the number at school exceeds the proportion to the total population. In all these areas the number of Muhammadans is comparatively small and (it may be surmised) largely resident in cities where educational facilities are available and educational attainments a more necessary asset than in villages. The advance in the two Bengals has been marked. The backwardness shown in the Punjab figures is attributed to the fact that the Muhammadans of that province in particular belong to the agricultural and lower working classes.

607. The rest of this chapter is devoted to the problems and characteristics of Muhammadan education and the manner in which some of the former are being solved. It is necessary, in reading it, to keep in mind the proportion of Muhammadans to the population of each province as shown in the preceding table. In the North-West Frontier Province the education of Muhammadans is the education of the people; there is no conflict with other interests. In Sind also the population is almost wholly Muhammadan. In Eastern Bengal and Assam and in the Punjab, over half the population is Mussalman; but in the former province the educational interests of the *The problem in different provinces.*

Muhammadans had long been ignored. Elsewhere the proportion is small. Perhaps it would not be quite correct to say that the difficulties of the problem vary inversely with the proportion. The reports would seem to indicate that it is in a province situated like Bengal that special measures are at once most needed and most efficacious.

III.—Muhammadans in ordinary institutions.

Special concessions.

608. Government support and private liberality combine to offer special inducements to Muhammadans to enter the ordinary educational institutions intended for all classes. The inducements generally take the form of exemption from fees and scholarships, the provision of hostels and modifications in the curriculum.

(a) Fee exemptions and scholarships.

609. Muhammadans are frequently admitted to schools on easy terms. When the numbers are few this is both desirable and feasible. In Madras and parts of Bombay Muhammadans are allowed to read at half-fees and in some cases free. In the Punjab special concessions are also allowed. In Bengal and Eastern Bengal and Assam, in addition to the 5 per cent. of free pupils allowed in government and aided secondary schools, 8 per cent. of the number of Muhammadans (limited in Bengal to a total of twelve pupils) are allowed to read free, while the Mohsin fund provides half the fees in the case of many other pupils. In all these provinces, again, special scholarships are reserved for Muhammadans; and there are also a number of private scholarships, such as those paid from the income of the Mohsin fund in the Bengals. In Bombay scholarships ranging from Re. 1 to Rs. 8 are given in local board schools; Sir Alimurad scholarships of Rs. 20 are awarded on the passing of the matriculation and two scholarships of Rs. 40 are given to Muhammadans of Sind who bind themselves to study for the B.A. and thereafter become inspectors. In Bengal six junior and eight senior scholarships, as well as others from private funds, are so reserved. In the Punjab there are special Victoria scholarships for Muhammadans and also other reserved scholarships, both public and private. In Eastern Bengal and Assam "the number of reserved scholarships was largely increased. Government has now set aside 31 upper primary scholarships, 23 middle vernacular scholarships, 19 middle English scholarships, 24 junior scholarships and 15 senior scholarships for Muhammadans, in addition to one post-graduate scholarship and five engineering and three law scholarships. District boards have also been persuaded to reserve for Muhammadans a number of primary scholarships. There are, besides, four junior and three senior scholarships provided from the Mohsin fund." It is also observed in the report on that province that in 1912, Muhammadans secured 294 lower primary scholarships out of 693 and 72 upper primary scholarships out of 168. By way of explanation, it may here be stated that of the Mohsin fund (the origin of which is described in paragraph 498) the portion assigned to educational purposes is Rs. 46,726 a year. This is expended on the government *madrassas* of the two Bengals (which, however, are largely maintained from provincial funds), grants to private *madrassas*, scholarships and (principally) payment of part-fees for Muhammadans. The expenditure on these objects, however, has now risen to Rs. 53,381 a year; and the difference is defrayed by the State.

(b) Hostels.

610. There are several reasons why the provision of Muhammadan hostels at colleges and high schools is of particular importance. In some areas (*e.g.*, Eastern Bengal) the Muhammadans, being mainly agriculturists, dwell for the most part in villages where higher education is not accessible. Their parents have a wholesome dislike of sending them to town schools unless they can ensure their supervision. The great importance attached by Muhammadans to religious exercises and instruction renders popular a place of residence where facilities for this exist in the shape of a neighbouring mosque and a superintending *maulvi*. The provincial reports do not treat very fully of this subject. But several Muhammadan hostels are mentioned in the Bombay report—at Broach, Sukkur, etc. The Elliott and Baker hostels in Calcutta accommodate students of the Calcutta *madrassa* and of arts colleges. In Eastern Bengal and Assam, apart from the hostels

intended for *madrassa* pupils (of which the most noteworthy is the Dufferin hostel at Dacca), special efforts were made to provide Muhammadan hostels at colleges and at government and privately managed high schools. There are now 82 such hostels in that province. Some are fine buildings—the Fuller hostel at Rajshahi, the Comilla hostel, to which government contributed Rs. 34,000, and the Dinajpur hostel, to which it contributed Rs. 16,000. The Muhammadans showed great enthusiasm in this matter and readily raised funds to supplement the grants offered.

611. The problem of curricula for Muhammadans in common schools is to some extent complicated by the language question. This question is frequently misunderstood. Urdu is the recognised *lingua franca* of the Muhammadans of India. But it does not follow that it is everywhere the vernacular commonly used by them, or even that they have any acquaintance with it. In the United Provinces, the Punjab, the North-West Frontier Province and some other areas such as parts of Bihar, it is a vernacular and is commonly spoken and taught in the schools along with Hindi, Gurmukhi, Pushtu, etc. Here the practical difficulty is minimised, since Urdu is actually taught in a great mass of the schools. Even when it comes into conflict with Hindi the difficulty is lessened by its structural similarity with that language. The United Provinces actually had text-books prepared, the one set in the Persian, the other in the Nagri script, but (save for a few words) identical in all other respects. In the Bengals it is not (save in some of the large towns) a vernacular. The Bengal Muhammadan speaks and writes Bengali and, unless he has received some higher education, no other language.* But he mingles a certain number of Urdu words with the Bengali (retaining, however, the grammatic forms and structure of Bengali just as Urdu has mainly retained those of Hindi), and the *puthis* (social and semi-religious books which have some vogue in the lower provinces) are often paged from right to left. This mixture of tongues (when carried to excess) has been classed as a separate language—Mussalmani Bengali. But the common vernacular is Bengali and no other; the Muhammadan boy is at no disadvantage in the common schools; and all that the Muhammadan wishes is that words of Persian origin, when in common use, be not consciously excluded from the school books, or religious expressions emphasised which may hurt his religious susceptibilities. No difficulties are reported in the sub-province of Sind, where five-sixths of the population speak Sindi and 76 per cent. are Muhammadans. Elsewhere the number of Muhammadans is few and they would naturally adopt (save in special circumstances) the language of the surrounding communities. It is just here, however, that the very paucity of their numbers sometimes induces them to preserve or to revive Urdu as a means of cohesion and self-preservation. Thus, in the southern parts of Madras, Muhammadans whose mother-tongue is Tamil are moving in the direction of Urdu; there is an agitation in favour of Urdu as a vernacular in districts of Bombay where it is hardly known to the general public; and the maintenance of a certain number of special Urdu schools in these two presidencies is evidence of a like tendency.

(*c*) *Curriculum.*

612. This preamble is necessary to show both the existence and the limitations of the linguistic difficulty. Where Muhammadans are numerous, either Urdu is a regular vernacular and taught in the schools, or the Muhammadans themselves speak another language. Save therefore in isolated instances, the difficulty arising from the enforced adoption of a language other than the mother-tongue as the medium of instruction exists only to a small extent. The trouble rather arises from the desire of the Muhammadan to acquire some knowledge of Urdu (which carries with it the mark of culture) or even Persian along with a Prakritic or Dravidian vernacular, and perhaps English.

(*a*) In primary schools, there is probably very little difficulty. Urdu is occasionally added to the prevailing vernacular to meet the wishes of Muhammadans. In Bombay there are Gujarati-Urdu and Marathi-Urdu standards forming a variant on the ordinary primary courses. One inspector

* Mr. Adam asserted that Bengali is the language of the Musalman as well as of the Hindu population, and that Urdu, while used by the educated Muhammadans of Bengal and Bihar, was never employed in the schools as the medium or instrument of written instruction. (*The Calcutta Review*, Volume II, pages 316-317.)

speaks of the additional language as a great handicap and generally unnecessary. In Eastern Bengal and Assam the experiment was tried during the quinquennium of introducing a little Urdu teaching into lower primary schools, with a view, says the report, to "enabling those Muhammadans who do not wish their children to learn English to give them instead some acquaintance with a language the knowledge of which is not only a social accomplishment but also the easiest gate to much of their religious literature." Capitation allowances were given for this teaching. The results of the scheme have not been conspicuous save that it probably served to attract a number of Muhammadan pupils to school.

(*b*) Sometimes the Muhammadan experiences real difficulty in secondary schools owing to his ignorance of the vernacular if his own vernacular is Urdu or if he has learned only Urdu. Sir A. Bourne remarks that the number of secondary schools in Madras in which Urdu is the medium of instruction is very small and that in other schools Muhammadans are at a disadvantage in the lower classes where a Dravidian language is used. A scheme has been sanctioned in Bengal for providing additional Urdu teachers in the lower classes of high schools where Muhammadans are numerous. But no similar complaints are found in the reports from other provinces.

(*c*) Sometimes the necessity or desire for a knowledge of Urdu, Persian or Arabic makes it very difficult to frame a time-table which is not overburdened for Muhammadan schools, especially for those that are emerging from indigenous into recognised institutions. The same cause is apt to keep Muhammadans back by reason of the large number of different languages they have to study.

Another difficulty is that arising from the nature of the text-books when these bear a distinctively Hindu complexion and contain allusions to forms of worship and stories from a mythology of which the Muhammadan parent does not approve. This was a problem that presented itself in a somewhat acute form to the text-book committee in Eastern Bengal. Mythological stories, however, can be so treated as to retain only their features of general interest; and the similar introduction of Islamic traditions and topics dissipates the feeling that Muhammadan interests have been overlooked.

IV.—Special institutions for Muhammadans.

Kinds of special institutions.

613. Special institutions for Muhammadans are of three kinds—(*i*) those which adopt the ordinary secular courses, (*ii*) those which, having generally started as indigenous schools, adopt a modified version of the prescribed curriculum and thus gain recognition, (*iii*) those which, whether recognised or not, have a scheme of study peculiar to themselves.

(*i*) *Ordinary institutions specially designed for Muhammadans.*

614. Muhammadans for the most part attend the colleges and schools open to all classes. But the desire to have some institutions of their own and especially to maintain in them the observance of their religion has led Muhammadans to establish higher institutions, while government or public bodies maintain secondary and primary schools specially for Muhammadans but following the ordinary courses. This does not mean that Hindus are excluded from these places; the college at Aligarh for instance admits Hindus. Nor does it mean that the curriculum followed is exactly that usual in other schools of a like grade; for Urdu is taught as the vernacular and the classical languages are Arabic and Persian.

Colleges.

615. There are three special arts colleges for Muhammadans. All of them are privately managed. The first is the Muhammadan Anglo-Oriental College at Aligarh. This institution is too well known to require description. It now numbers 610 students. It receives from government an annual grant of Rs. 14,400, and the services of Dr. Horovitz, a specialist in Arabic. It was proposed during the quinquennium to make it the seat of a Muhammadan university. Some account of this movement has been given in paragraphs 57 and 110. The second is the Islamia College at Lahore, with 180 students. It has been provided with a fine new building. The third, founded just after the close of the quinquennium, is the aided Islamia College at Peshawar. The movement was initiated in 1909 by the leading Muhammadans

of the province. Promises have been made of eight lakhs of rupees in subscriptions and much has already been realised. Guided and fostered by the efforts of the Chief Commissioner, the scheme has advanced, a fine site has been purchased on the Khyber road, the foundation stone of the mosque was laid in 1911 by leading *Mullas,* of whom some 400 were present on the occasion, and the school is already erected and at work. The college will contain arts and Islamic courses and will present a signal indication of the influences of the *pax Britannica* among the border tribes.

Schools.

616. In the *Madras* presidency there are a number of special Muhammadans schools—60 maintained by government, 520 by local bodies, and 501 aided. Four of these are secondary schools, of which the Madrassa-i-Azam, "second to no school in the presidency for buildings and playground' is specially noticeable, while the Harris High School of the Church Missionary Society is particularly well attended. The existence of Muhammadan schools in *Bombay* is indicative of the popularity of Urdu. Of over 20,000 Muhammadans in primary schools in the Northern division nearly half are reading in Urdu schools; yet the Muhammadans of Gujarat speak for the most part only Gujarati. In the southern division of that presidency where Muhammadans are few, the number of Urdu schools has risen from 120 with 5,755 pupils to 206 with 11,893 pupils.* In *Bengal* the place of special primary schools is taken by recognised *maktabs.* In *Eastern Bengal* the same is the case to some extent; but the Muhammadan population is so large that the common schools are often tenanted almost wholly by Muhammadans, whose vernacular over practically the whole province is the same as that of the Hindus. The Anglo-Persian departments of the Calcutta, Dacca and Chittagong *madrassas* are really high schools for Muhammadans. And the middle *madrassas* of Eastern Bengal are little more than middle English schools. In the *Punjab* high schools are maintained by the local Anjumans at Lahore, Amritsar, Ludhiana, Hoshiarpur, Multan and Rawalpindi, and by the Ahmedia sect at Qadian. The Anglo-Arabic High School at Delhi was placed on a new footing with the help of grant in 1908, and is now an excellent institution; notwithstanding the enhancement of fee-rates, its pupils have increased from 310 to 880. Burma reports the existence of certain Muhammadan schools. There are Anjuman high schools at Nagpur and Jubbulpore in the Central Provinces.

Backward classes.

617. Special efforts are made to educate particularly backward sections of the Muhammadan community. The Mappillas of the west coast of Madras are making good progress and the number at school has risen by 40 per cent. Education is also increasing among the Muhammadan inhabitants of the Laccadive Islands.

(ii) Indigenous schools with a secular course.

618. The material out of which the second class of institutions has sprung is the Koran school—a useful institution from the purely religious point of view, but often worse than useless from the educational, since it seems to mask ignorance and the paucity of those who are undergoing even the most elementary instruction. The conversion of such indigenous institutions into useful schools has always been the policy in India. In recent years the process has been accelerated. The reform of the *mulla* schools of Sind, which began ten years ago, was described in Mr. Orange's review. Those schools which would not adopt a simple secular curriculum in the vernacular were deprived of recognition. Those that did so (after ministering to the spiritual needs of their pupils) received a double grant. The system was a success. It has now been generally adopted in Aden also. During the last eight years similar efforts have been made with *maktabs* in Bengal. Part of the scheme of 1904 for improving Muhammadan education in that province was the provision of government model *maktabs.* Seven were established; and it has now been proposed to add fourteen others. The conversion of indigenous *maktabs* into primary schools of a modified type has steadily continued since 1904. A syllabus of studies and a teachers' manual were published in 1911. A grant is given to a recognised *maktab* equivalent, for the first year class to half that given in a lower primary school, in the second class to the full grant, and in the third and fourth classes on a scale 25 and 50 per cent. higher respectively

* Elsewhere the number of Urdu schools in this division is reported as having risen from 157 to 243.

than that for which a lower primary school is eligible. If instruction is given in a vernacular other than Urdu and the appointment of a second teacher is therefore necessitated, a grant is earned at double the rate of that for a lower primary school. The number of recognised *maktabs* has risen in the period from 1,646 to 3,695, of which 3,037 are aided. Nor are those which are not recognised (*i.e.*, have not adopted the prescribed curriculum) necessarily debarred from grant; there are 841 such institutions, and 124 of them are aided. The total number of pupils in *maktabs* has risen from 50,402 to 112,785 and the total expenditure from Rs. 1,42,727 to Rs. 3,11,477, of which Rs. 1,07,915 is met from public funds. In Eastern Bengal the recognised *maktab* plays a smaller part because the strongly Muhammadan character of the population and the staffing of many elementary schools by Muhammadans facilitate the admission of children of this community to the ordinary institutions and the transformation of the *maktab* into a regular primary school. Nevertheless, there are 1,584 such institutions, aided as lower primary schools, with 54,703 pupils. And a special *maktab* primer, two readers and a teacher's manual have recently been prepared and prescribed.

(iii) Schools of special studies.

619. The third class comprises those institutions which were primarily intended for the pursuit of distinctively Islamic studies. They are partially described in chapters XII and XX. They are the *madrassas*—colleges and schools for the study of the Arabic and Persian languages and literature, law, logic, rhetoric, philosophy, theology, the exegesis of the Koran and the traditions of the Prophet. The requirements of modern life have insinuated into some of them a modicum of modern learning or whole departments of secular instruction. "On the one hand there is the veneration, fostered by long custom and sanctioned by religion, for an old-world system of school and collegiate education. The characteristics of this system, the trustful enthusiasm with which it inspires its votaries, instinctively carry the mind back to the traditions of the mediaeval universities. The sight presented by the higher class *madrassas* is profoundly striking, and, in a way, pathetic. The students, with their intensely earnest faces and their treasured volumes, wrapped in their studies, blind to so much of the realities of modern life, startle us like a picture of the past intruded into everyday surroundings. On the other hand, there is the sub-conscious but growing idea that studies of greater utility must be introduced."

Madrassas.

620. There are *madrassas* in Sind—the Sind, the Naushahro, the Larkana and the Pithoro Madrassas. The last was opened during the quinquennium by a local board and is reorganised as an anglo-vernacular school. The Arabic schools of the United Provinces, at Deoband and elsewhere, are famous and are mentioned in paragraph 659. The *madrassas* of Bengal and Eastern Bengal and Assam are particularly numerous and important. In the latter province there are 161 of these institutions (three managed by government and 113 in receipt of aid) with 12,923 pupils. In the former, apart from the two government *madrassas*, the number of those under private management has risen from 16 with 907 pupils to 38 with 2,982 pupils, and 21 of these are aided. The better kind of them present candidates at examinations held by a central body—the Central Board of Madrassa Examinations, Bengal. The smaller *madrassas* aim at teaching the same curriculum, but generally to a lower standard. Many have vernacular departments attached. The most important of these are the large government *madrassas* at Calcutta, Dacca and Chittagong. The first of these, the Calcutta Madrassa, founded by Warren Hastings, is one of the oldest and most famous institutions in India. Each of these three *madrassas* is divided into two departments—an Arabic department teaching up to the high standard examination of the central board and (in the case of the Calcutta Madrassa) on to the title examination; and an Anglo-Persian department, which is simply a high school for Muhammadans teaching to the university matriculation. In 1912, the number of pupils in the Arabic departments of these institutions was 1,381, and that in the Anglo-Persian departments was 1,238. The cost of maintenance was Rs. 1,25,402; this is met partly from fees and the Mohsin fund but mainly from provincial revenues. In addition to these are two smaller government *madrassas*, one at Hooghly in Bengal, the other

at Rampore Boalia (Rajshahi), in Eastern Bengal. These have no Anglo-Persian departments, being in each case attached to an arts college with a high school on the premises. The number of their pupils is 205 and their annual cost Rs. 16,184.

621. The organisation and utility of the Bengal *madrassas* have come under discussion during the quinquennium. It was felt that the type of education given in the Arabic departments was not the best suited for the exigencies of modern life nor so conducted as to facilitate a rapid and intelligent grasp even of the recondite subjects which they profess to impart. Among the comprehensive schemes of Muhammadan education formulated during the period in the two Bengals, the reform of *madrassa* education has assumed a position of importance. A conference for Bengal was summoned at the close of 1907. It recommended a scheme of reorganisation which raised the course from eight to eleven years, including six junior or school classes and five senior or college classes. The lower and higher standards of the *madrassa* examinations are to be passed at the close of the third and fifth years of the college course. Further, additional title courses of three years were created, each leading to a specialised examination in theology, literature, law or logic, on the result of which titles are bestowed. Persian was made optional above the third year in the junior standard. English is an optional subject, and was taken by 144 pupils of the Calcutta Madrassa in 1912. It was proposed to add to the college course, for those who had studied English as a portion of it, a two years' course of English instruction with a view to making it possible for students of the Arabic departments to acquire a knowledge of that language approximately equal to that possessed by an ordinary graduate. But the classes have not yet been opened. New appointments have been created in the two government *madrassas* to carry out the scheme of reform, while attempts have been made similarly to improve privately-managed *madrassas*, the grants to which were raised from Rs. 960 to Rs. 9,480 a year. This reorganisation did not prove altogether acceptable to the Muhammadans of Eastern Bengal and Assam. The full senior *madrassa* in this province consists of ten classes, six constituting the junior or school and four the senior or college department. English, optional in the senior department, is usually (says the report) compulsory in the junior. The reforms of the Calcutta committee did not seem to go far enough. The compulsory prescription of English throughout was demanded, also the re-modelling of the whole course on more modern and rational lines. A committee, consisting mainly of Muhammadans, was accordingly summoned, which proposed a reorganisation of the *madrassas* and made other recommendations covering the whole field of education from the *maktab* to post-*madrassa* courses. *Reform of Madrassas in the Bengals.*

622. A special development in Eastern Bengal has been the establishment of middle *madrassas*. The scheme, initiated by Sir Bamfylde Fuller in 1905, was intended to offer an opportunity of education in mainly Muhammadan areas and an object-lesson in the combination of modern secondary with ancient classical instruction. Each was organised with an Arabic department and with a middle English school. In the conservative division of Chittagong these schools have proved a failure. In the Dacca and Rajshahi divisions they have proved a marked success, numbering 41 with 6,000 pupils. They are maintained at a cost of Rs. 57,000; and so popular have they proved that public funds are required to meet but a small portion of this sum. The not unnatural tendency is for them to develop into pure middle English schools teaching Urdu and Persian. A certain number have dropped the Arabic department altogether; and elsewhere the two departments are separately conducted. They have brought English education within the reach of communities to whom it was not available; and the very name of *madrassa* has proved a talisman in overcoming the prejudice against such instruction. In this way they have at least fulfilled half their intention. *Middle madrassas.*

V.—Miscellaneous measures.

623. There are a few points which pertain strictly to neither of the two foregoing sections or which are of general application. These are the questions of Muhammadan teachers and their training and of inspection.

Want of teachers.

624. In some provinces the paucity of Muhammadans in the public services has long attracted attention. This backwardness in employment often figures in the resolutions passed at their conferences. The cause is the lack of qualified Muhammadans. Sir A. Bourne hints that there is another side to the question. "It is also both a cause and consequence of indifference to higher education that well-to-do Muhammadans are so commonly in business and perhaps this indicates a prevalence of commonsense." If it is difficult to obtain qualified candidates generally, it is doubly so in the case of educational posts, where prospects are not alluring. Owing to the demand for them in other and more lucrative forms of employment, Muhammadans will not readily undergo training, and it is sometimes difficult to keep even the trained man to the profession for which he has been prepared.

Employment in educational posts.

625. The following facts regarding the educational employment of Muhammadans have been gleaned from the reports. The Bombay report bewails the lack of Muhammadan teachers, but adds that, in the northern division, two deputy inspectors out of six and six assistant deputy inspectors out of 25 are Muhammadans. Of the total of 470 inspecting officers in Bengal, 105 are Muhammadans, while there are also 135 Muhammadan teachers in government colleges, *madrassas*, secondary and special schools, who, with 17 clerks, make a total of 257 in the department of public instruction. In the United Provinces, out of 132 sub-deputy inspectors only 21 are Muhammadans. But in vernacular schools the teachers of this community number 1,886 against 10,015 Hindu teachers, and in English schools 216 against 689—creditable figures, when it is remembered that only 14·1 per cent. of population of that province is Muhammadan. In Eastern Bengal and Assam, out of 246 inspecting officers, 114 are Muhammadans; and they form, in the Eastern Bengal divisions, from 43 to 44 per cent. of the staff. The number of Muhammadan teachers in institutions of all kinds in that province has risen from 9,654 to 14,656.

Training facilities.

626. Madras has four special schools for training Muhammadans, two for masters and two for mistresses. A central training class was started in Broach (Bombay) and it has been decided to establish a purely Urdu training class in the northern division, where Gujarati will be taught for only one period a day; in other training colleges also, efforts have been made to encourage Muhammadans. Under the Bengal scheme of 1908, it was proposed to convert seventeen *guru*-training schools into *mianji*-training schools for the production of Muhammadan primary teachers (*mianjis*), the three instructors in each being on special pay of Rs. 30, Rs. 20, and Rs. 15. Ten such schools have actually been opened. A normal school at Aligarh under a Muhammadan headmaster is expected to attract better teachers of that community. In Eastern Bengal the number of Muhammadan teachers is very large. Provision is made for them in the *guru*-training schools, separate hostels for Hindus and Muhammadans having been attached to many of these institutions. In the Central Provinces a special Urdu normal school was established during the quinquennium at Amraoti (Berar), and an Urdu class was also opened in the new normal school at Khandwa.

Special inspectors.

627. In Bengal there are three special assistant inspectors of Muhammadan education, whose work is to visit Muhammadan schools throughout the circle and to keep the inspector informed of requirements. In other divisions there are special Muhammadan deputy inspectors. Seven inspecting *maulvis* had been appointed in 1904. At the end of the quinquennium funds were provided for increasing their pay and creating nine additional posts. In areas where Muhammadans are either very numerous or very scarce the need for special inspectors (apart from those members of the ordinary staff who are Muhammadans) is less marked. But a beginning was made in Eastern Bengal during the quinquennium of appointing Muhammadan sub-inspectors of special qualifications in areas where that community is most numerous, with a view to their introducing greater efficiency into *madrassas, maktabs*, and other institutions where Arabic, Persian and Urdu are taught. Burma has a special deputy inspector for Muhammadan schools in Akyab, and another has been sanctioned for Arakan.

CHAPTER XVII.

THE EDUCATION OF BACKWARD CLASSES.

I.—General.

628. It is a commonplace to say that India presents a greater diversity of races than does Europe. Successive waves of conquest have broken over the continent. Throughout the peninsula is found the Dravidian stock, on which have been superimposed, more or less strongly, the characteristics of surrounding or invading nations. The Aryans have driven a wedge from the north, through Kashmir, the Punjab and Rajputana; their physical type is mixed with the Dravidian in the United Provinces; their language forms a component of the vernaculars as far south as Goa on the west coast and Puri on the east. Invaders (perhaps alpine) have tinged the race-type along the west coast from Sind through the Mahratta country nearly to Travancore; the Mongoloid type has permeated through Bengal. Beyond the peninsula are other races—Turko-Iranian in Baluchistan and the North-West Frontier Province, Mongoloid in Nepal, Assam and Burma. Combined with differing racial and linguistic characteristics there is the system of caste. It is natural that in such an agglomeration there should be found communities that require exceptional measures—aboriginals, 'fragments of forgotten peoples,' classes whose social status or language isolates them from a common system, or wild border tribes hardly touched by civilising influences. These races or castes require special treatment; and it has been the policy of government to accord it. *The races of India.*

629. The classes dealt with in the present chapter are necessarily ill-defined and merge more or less in the surrounding population. Generally speaking, they may be summarised as falling under three categories—(*i*) aboriginals and hill and forest tribes, (*ii*) depressed classes, (*iii*) communities who, though not necessarily either backward or depressed, present problems of education different from the ordinary. *Classification.*

II.—Aboriginals.

630. In the last two quinquennial reviews the number of animists was taken as a rough (but admittedly imperfect) indication of the number of aboriginals. The figures for these at the time of the 1901 census was about $8\frac{1}{2}$ millions. The answering figure in 1911 was about $10\frac{1}{4}$ millions, of which $7\frac{1}{3}$ millions were in British provinces as against nearly 6 millions in 1901. (From a consideration of the race figures given in the census, 18 millions appear to be about the number of aboriginals to-day.) But it may be admitted at once that these figures are not a safe guide to the number of aboriginals as treated in this chapter. There is a tendency to become hinduised among many of those who are in contact with Hindu communities; and the efforts of Christian missionaries have not been without fruit in some of the hill-tracts. Special measures are necessary for only a fraction of the full number. The aboriginals are in two main groups. (*a*) From west to east there stretches across India a band of rugged and forest-clad country. Two branches run eastwards from Rajputana and Bombay, the Aravallis and the Vindhya range to the north, the Satpura and Mahadeo hills of the Central Provinces to the south. In the wild and broken country about the sources of the Nerbudda and the Sone, these highlands mingle in the Maikal range and run on to the bluff of Parasnath and where the Rajmahal hills overlook the Ganges just north of the apex of its delta. Here dwell some of the most primitive tribes of the Dravidian race—the oldest race in India as Sir Herbert Risley has called it. To the west—in Bombay and Rajputana are found the various classes of Kolis and the hunting Bhils whose original home is between Mount Abu and the hill-fortress of Assirgarh. The Korkus, speak- *Aboriginal groups.*

ing a Munda tongue, inhabit the Mahadeo hills. Then comes the still numerous race of Gonds, who live in the highlands of the Central Provinces. Along the Indravati, in the Bastar State, they still exist in their primitive condition, using stone implements and shunning the face of man. In the plateau districts of British territory many have come into contact with civilising influences, but still retain much of their wild way of life. They cultivate the smaller millets and eke out their crops with forest-produce and the chase. A smaller tribe is that of the Baigas, regarded by the Gonds as more ancient than themselves and as possessed of magic power and priestly craft. In Chota Nagpur and Bengal are the tribes previously distinguished as Kolarian, but now as Munda-speaking Dravidians—Mundas, Hos and the numerous race of Santals. Southward an outlaying spur stretches into Ganjam and still further into Madras, peopled by Khonds and Savaras, the former once famous for their human sacrifices. Further to the south are the Kanikar, Kurumba, Yanadi and other tribes. (*b*) The second great aboriginal group lies in Assam and the hill-tracts behind Chittagong. The history of Assam is shrouded in obscurity. But the earliest inhabitants of whom we have knowledge appear to be tribes of Mongoloid origin, who still form the population of the hills and forests. On the range that cuts Assam from east to west are the Khasis, a people of small stature and almost Japanese appearance. On the western end of that range dwell the Garos, with other tribes, such as the Meches and Rabhas, on the plains below. On the east of it are the Kacharis. Eastward of them again, and northward to the Patkoi range, are the head-hunting Nagas. To the south of the Surma Valley, among hills that merge into the Arakan mountains, are the Lushais, the Kukis and the Tiparas. Along the foot-hills of the Himalaya are the Mishmis, the Abors, the Miris and the Daflas. All these, save the Khasis, speak languages of the Tibeto-Burman type. These tribes probably represent very early invasions. But it is certain that Hindu colonisers from the west had also forced their way up the Brahmaputra valley more than a thousand years ago, and exercised an influence upon the later invaders from the east, who overcame them, especially upon the Ahoms—a Shan tribe who have given their name to the country and whose rule continued, though latterly enfeebled, from the thirteenth century until British times.

631. There are other aboriginal groups. Especially there is Burma with 700,000 animists. But here the problem of classification is confused. It is a small item that the animists include nearly 90,000 Chinese. Racial instability and the uncertainty of early history are more important difficulties. If original occupation of the land (so far as the most ancient records go back) and a certain degree of savagery are taken as the definition, the aboriginal is not an important ingredient in the population. The greater portion of the province was peopled or invaded by races whose languages, formerly distinguished as Munda and Mon-Khmer, are now regarded as forming a single family. The remnants of those invaders—the Talaings and Wa-Palaung—are perhaps the only tribes who can be classed as aboriginals—and that by reason of the remote date of their advent, their isolated position, hemmed in as they are and so to speak driven to bay by later immigrants, and the diminishing numbers of the Talaings. Then came the Tibeto-Burman invasion—Chins, Kachins, Burmese and the Lolo group. One might be tempted to include in the present category the inhabitants of the Shan States. The Karens (in the southern of those States and in Burma proper) are a somewhat mysterious race who probably came to their present habitation from the highlands of western China. "Peacefully, quietly and unobtrusively they moved, avoiding all contact with the tribes they passed. Following the lines of least resistance, they preferred the hardships and the obstacles of the hills, the jungles and the wild uninhabited regions on their route, to the more formidable dangers of conflict with their fellow beings." After these, probably about the beginning of the Christian era, came the Shans—an established nation in south-western China, attempting to extend its power by means of conquest. But these were Siamese-Chinese invasions, later in date than that which brought to Burma the bulk of its inhabitants. This and the comparative civilisation of the Karens suggest the inclusion of these tribes in class (*iii*).

632. If it is difficult to calculate the numbers comprised in aboriginal and hill-tribes, an accurate total of those under instruction is even more impossible. The last census shows that, among animists, 5 per mille were literate. Some of the reports speak of the almost total illiteracy among the peoples thus classed. In Madras there are only two literates per mille. In Bombay we are told that there are practically no literates at all. In Burma (where 59 males and 2 females per mille are classed as literate) the figure of literacy is enhanced by the inclusion of the Chinese population and would almost vanish if these were excluded. The Burma census report observes that as members of animist tribes become educated they are absorbed either into the Buddhist or the Christian communities, their only avenues to literacy being through the monastic or the mission schools. Doubtless a similar process occurs in other provinces, too, by which the animist when he becomes educated also passes into another class of religion. *Numbers under instruction.*

633. From the educational reports it is found that the members of aboriginal and hill-tribes now under education number 159,244 as against 112,643* in 1907. The meagreness of the figures of those under instruction need be no matter of wonder to those who know the conditions of life among these races. Those that live in the plains are often wandering tribes. Those of the hills are confined of necessity or of choice to places which lie far from the beaten track, forest-clad, savage and malarious. It is difficult to educate the aboriginal to become a teacher. A teacher of a more civilised community sent from the plains to undertake work among the hill-tribes is likely to meet with a cool reception; nor is a monotonous and nasty life passed in a feverish climate in places infested by carnivora, reptiles and the imagined terrors with which such spots are clothed likely to keep him contented at his post. Another difficulty is that of language. The aboriginal languages have no script of their own and it is not always easy to acquire a knowledge of them. Among the Dravidian tribes some of the languages have died out. Among the Mongoloid tribes the languages are living and are often very difficult, with numerous and widely varying dialects.

634. The Dravidian group, stretching in a line from the west coast to the east coast and the Ganges, shows 92,707 pupils at school. Of these, however, no less than 53,036 are in Bengal among the Oraons and the Munda-speaking tribes who in their susceptibility to education and other influences differ from the tribes in Bombay, the Central Provinces, Chota Nagpur and the northern portion of Madras. The Dravidian races on the whole form the remnants of early inhabitants driven back to sterile hills. Some of them are rapidly losing their languages and those who have not already lost them are sometimes bilingual. In Bombay and the Central Provinces it is very possible that progress is masked by reason of the passage of aboriginals into the ranks of Hinduism. *In the two main groups.*

635. Among the Mongoloid tribes of Eastern Bengal and Assam and of Burma conditions are somewhat different. Generally speaking these tribes mark the result of invasions which, if not comparatively modern, have at least taken place within historic times; and in Burma they are not fully distinguished from some quite recent immigrants. They are not generally backward-going as are the bulk of the Dravidian tribes. They retain their languages—an added difficulty in the task of their instruction. Many of them are intelligent and clever with their hands. The Naga hills present a model of irrigated cultivation. The Khasis have made great strides in moral and material well-being since the Welsh Calvinistic Mission entered these hills and among other benefits introduced the cultivation of the potato. The number under education appears to be 66,537, though in Burma not all of those thus classed can truly be regarded as aboriginals.

636. The tribes of the former group may be considered in their geographical order from west to east, Bombay, the Central Provinces, the southern off-shoot in Madras, and Bengal. *(a) The Dravidian group.*

The aboriginals in *Bombay* are Bhils, Kolis, Talavias, Dharalas, Katkaris and the Kaliparaj tribe. The total number at school is 18,740. Mr. Godbole reports of the

* The figure is taken from the present reports. Mr. Orange calculated 121,961 aboriginal pupils in 1907. When classification is so uncertain, some discrepancy is to be expected.

Bhils of a certain area in the Central division, that they "are happily placed in life and are owners of land and they look with disfavour upon the idea of their sons becoming members of the teaching profession, which, besides being ill-paid, weans the boys from their homes and landed estates." Nevertheless, the system of hostels and of special facilities for training as teachers appear to have been successful. These will presently be described. The only aboriginal tribe mentioned in the *United Provinces* report is that of the Tharus in the Himalayan Terai. A middle school has been started for them and special arrangements were made for the training at a normal school of two youths to become teachers. The special measures adopted in the *Central Provinces* are not reported. But Gonds and other aboriginals at school have increased from 6,382 to 16,171. Among the aboriginals of *Madras* are the Khonds (including the less uncivilised Jatapus and Kondoras), the Savaras, Panos and Koyas. These are mostly found in the northern districts of Ganjam, Vizagapatam and Godavari. In the Ganjam agency tracts both schools and pupils have fallen owing to the closure of aided schools, and of the 151 existing institutions 87 are maintained by government. Most of these are specially for aboriginals. In other parts of the presidency there are a few schools for Chenchus, Lambadis, Pulayars, Todas, etc. The total number of aboriginals under instruction is reported as 5,630. The inspector of the northern districts remarks on the difficulty of obtaining teachers for Koya schools, and suggests that, for instruction in arithmetic and reading, the Koya language (reduced to writing by the Rev. J. Cain) should be used and should be learned by the teachers, Telugu being used only for practical purposes. The principal work for the education of the aboriginals in *Bengal* lies in the Santal Pergunnahs, at Ranchi, in Singhbhum and among the Khonds of Orissa. There are many others—the Mundas and Hos of Chota Nagpur; the Dravidian Oraons, Paharias, Kandhs and Gonds, and the Tibeto-Burman Lepchas and Bhutias of the Himalaya. The animistic population is returned at over thirty-one lakhs. Of these 4·7 per mille of the males and 0·31 of the females are returned as literate. This seems little enough. But there are 53,036 pupils under instruction, examination results are creditable and it is possible to appoint members of these races as inspecting officers. The number of Khonds at school has quadrupled during the period, though attendance is very poor.

(b) The Mongoloid group.

637. The Mongoloid group is found along the foot-hills of the Himalaya, in Burma (though for reasons explained, it is difficult to class the hill-people of Burma as aboriginals), and in Assam. It is in the last-named area and a portion of Chittagong that a particularly interesting collection of races is found. Here the tumbled mass of hills that run south from the Patkoi along the Burma border contain the Khamtis, the Nagas, the Manipuris, the Lushais, the Kukis, the Tiparas, the Chakmas and the Maghs. From this a branch range runs west between the Surma Valley on the south and the Brahmaputra on the north till it abuts on that river's southward bend; here live the Kacharis, the Jaintis, the Khasis and the Garos.

Among the mass of hill-tribes in *Assam* (with their ramifications into Eastern Bengal) missionaries have generally been the pioneers of education. In the Lushai, Khasi and Jaintia hills almost all schools are managed by missions. In the Chittagong hill tracts they are managed by government. In the Garo and Naga hills they are maintained by both agencies. The system has generally been adopted of lump grants to the missions, who are permitted to do their best with them, though gradually a certain amount of control has been introduced through insistence on capitation—allowances for pupils in various classes, with a view to raising the standard of instruction. The grant to missions is over Rs. 18,000 a year. Such control as exists is exercised through inspecting officers of the hill-races, supervised by Europeans; but, where schools are few and far between, the missionaries themselves are made honorary inspectors under the general supervision of the civil officers. The progress of education has been slow but steady. That the expansion has not been more rapid, says the report, is due not to any lack of efforts, but to the fact that diversity of race, custom and religion makes any educational question more complicated in this region than in the rest of the province and renders the adoption of a uniform educational policy well-nigh impossible. A survey of these schools was made in 1909-10 and the inspector laid special stress on the mode of training, the improvement and multiplication of text-books in the hill languages, greater regularity of inspection, greater attention to the education of girls and the desirability of restraining literary tendencies and checking the divorce of instruction from the ordinary life of the people.

The Welsh Calvinistic Mission is the main educating agency in the Khasi and Jaintia hills. There are five middle schools, 428 primary schools with 9,304 pupils, a training school, an industrial school and a high school (in the last however the Bengali element prevails). In the Garo hills the American Baptist Mission maintains a middle English school and 110 primary schools, and government maintains a training school and 40 elementary schools. The grants made by government to these mission amounted, in 1912, to Rs. 9,176 and Rs. 2,760. The organisation in the Naga hills is different. Here the schools are mainly government schools, though a few are maintained by the

American Baptist Mission. There has been a set-back to education during the quinquennium. The curriculum was overloaded with English and Assamese as well as Angami. The demand for English-speaking Nagas is very small. And the Naga, being of a practical turn of mind, did not appreciate education which was of no apparent use to him. An industrial school, on the other hand, opened at Kohima, has flourished. In the Lushai hills also the major part of the education is conducted by the missions (the Welsh Presbyterian and the English Baptist) working in co-operation with the superintendent of the hills. Here, however, the system pursued is different from that already described. The work is concentrated at the headquarters of the two missions—Aijal and Fort Lungleh. Here the pupils are under the constant supervision of the missionaries, and hostels are provided. The sons of the chiefs in especial are educated. The scheme is successful. Some of the pupils have been sent on with scholarships to the high school at Shillong. The elementary schools in the villages have not fared so well. Though their number has risen from 16 to 29, and though in the Aijal subdivision opposition is giving way, there seems to be no demand for education—rather the opposite. In these hills the missions now spend Rs. 2,078 annually, while government aids them with an annual grant of Rs. 3,370. There are four schools in the North Cachar hills. Two of these were previously managed by the board but have now been handed over to the Welsh Calvinistic Mission. It is understood that some industrial training is given in the central school at Haflong. The schools for Kacharis maintained by missionaries in Darrang are said not to be progressing. In the Mikir hills (a detached range just to the south of the Brahmaputra) missionaries maintain twelve schools with the help of grant, and the local board of Nowgong maintains sixteen schools.

In *Eastern Bengal* the chief centre of hill-races is in the Chittagong hill tracts where the Arakan Yoma trends southward from Lushai. Here live Maghs, Chakmas and Tiparas. The educational institutions are mainly maintained by government. A high school has been established for them at Rangamati, the headquarters of the district. Here 69 hill boys are educated, generally free of charge, and housed in a hostel where many of them receive free board and lodging. The cost to government is nearly Rs. 7,000 a year. Two English middle schools have disappeared. But a vernacular middle school is maintained; and this also possesses a hostel where some of the boys are fed and lodged free, while no charges are made for education, the whole cost being defrayed by government. There are also 95 free primary schools on which government spends over Rs. 11,000 a year. The Garo hills abut on the plain of Mymensingh. Some very backward tribes live at the foot of the hills. The Birisiri Garo Australian Mission maintains an English middle school with 46 aboriginal pupils; and there is a middle *madrassa* with 33. The district board maintains eleven primary schools (seven started during the quinquennium), and the mission has some 28 primary schools. The figures of attendance are poor.

The Talaings of *Burma*, though they have increased in numbers, show a marked falling-off in special schools. This is probably due to their having resorted to ordinary schools. Over 50,000 pupils of hill-tribes are shown at school, but they can hardly be described as aboriginals.

638. Among hill-races might be classed the border tribes of the North-West Frontier Province. As, however, the system applied to them is fairly uniform with that prevailing in the province as a whole, they are treated of in the chapter on general education. *Pathan races excluded.*

III.—Depressed classes.

639. Depressed classes are to be found all over India. There are untouchable castes, whose children, if permitted to attend the common schools, may sit only in the verandah and gather a few crumbs of knowledge. There are classes who are socially or vocationally distinguished and despised. There are criminal tribes. Often these classes are really aboriginal in the sense that they are people found on the land by subsequent invaders and reduced to the condition of hewers of wood and drawers of water. They have remained on the plains and become a part of the social organism. The aboriginals previously described have retained their characteristics and their independence, sometimes at the risk of a precarious livelihood, by beating a retreat into the mountain fastnesses. The number at school appears to have increased from 179,367 to 217,629, far the largest number being in Madras, and the next largest in Bengal. The figure, however, is doubtless much under-estimated, since many children, reading in ordinary schools, are not thus classed, and as returns are supplied only by a few provinces. These reasons and the census figures of literacy prove the calculation to be valueless. *Figures.*

640. In *Madras* the large community of Panchamas fall under this category. They include the Tamil Paraiyans, the Telugu Malas, the Canarese Holeyas and others. They *In different provinces.*

are educated both in the ordinary and in special institutions, the latter including two training schools, 439 board schools and a number of mission schools. The amount expended on their special education has risen from Rs. 4,31,217 to Rs. 6,07,775. To the latter sum public funds contribute Rs. 2,63,072 and private sources Rs. 3,27,311, the balance being paid as fees. "It is still the case," says Sir A. Bourne, "that Hindus in general take little interest in these people and practically all that has been or is being done to elevate them is the work of missionary bodies among whom, in this connection, the Theosophical Society may not improperly be included, and directly through local boards, and indirectly by means of grants-in-aid by government." As was anticipated, the number of special schools classed as secondary has fallen, while there has been an increase of elementary schools, especially among those which are maintained by missions with the help of grants. The number of pupils in special schools has risen from 86,236 to close on 100,000. The increase of Panchamas in all classes of institutions, special and otherwise, has risen by nearly 30 per cent. But the increase is obscured by the return of pupils under other denominations. The measures taken in *Bombay* for the education of the depressed classes are similar to those for the aboriginals. A main difficulty is the provision of teachers. The failure of some of the schools is commonly attributed to the want of sympathy of the teachers towards backward races. The inspector of the Central division says:—"The advance in education made by the depressed classes during the last five years in the face of difficulties like poverty, caste prejudices, etc., clearly shows that they are gradually beginning to appreciate the efforts of the department and the various Christian missions in the direction of educating them and thus lifting them up morally and socially. The facilities afforded by the department in the shape of scholarships, prizes, etc., have been chiefly instrumental in creating a taste for education among the depressed classes. The scholars of the depressed classes have succeeded in passing the vernacular final examination and subsequently gaining admission into the Training College. Some of the low-caste schools have now thus secured trained low-caste teachers." In the same division four members of depressed communities have received university education (against none in the preceding period); and in the northern division fifteen are in secondary schools. The Depressed Class Mission is doing good work under the presidency of Sir Narayan Rao Chandavarkar. It is realised that industrial education is in some cases of greater importance to these castes than literary. Attention is also paid to the criminal tribes, some of whom, like the Dharalas, are classed as aboriginals. In Bijapur district the children of criminal tribes are admitted to the ordinary schools and are given stipends. In Dharwar there is a special school for them, and no pains are spared to induce the children to attend, fees being remitted, scholarships given and books, slates and articles of clothing supplied free. *Bengal* returns 73,751 of the depressed castes as under instruction; but the classification is uncertain; and figures are mentioned for other castes and races who might be so classed. The most notable work is done among the Pans in Angul and the Orissa tributary states. Special schools have been erected and a slow increase is observable. In the Delhi division of the *Punjab* there are 27 low-caste schools, mainly for Chamars. Twenty-three of these are conducted by missionaries. Government gives special grants for the criminal tribe of Minas. There are a few schools in other divisions; but the whole number seems to be very small. The Oxford and other missions are doing excellent work among the Namasudras of Backergunj, Faridpur and other districts of *Eastern Bengal*. But these operations are not described in the report. In the *Central Provinces* the number of low-caste children at school has risen from about 15,331 to 16,231, and the number of them in secondary schools has doubled.

IV.—Isolated communities.

Isolated communities in Burma and elsewhere.

641. The third class (isolated or peculiar communities not necessarily backward or depressed) contains groups of people who differ in origin and habit from the bulk of the surrounding population. It is in Burma that communities of this class are mainly found. Here special measures have been taken in the Shan States. In the northern States the American Baptist Mission maintains an anglo-vernacular school at Hsipaw. Apart from this, and two government schools already existing, all lay schools were taken over by the state in 1911-12. "Teachers," says the inspector, "receive fixed salaries *plus* a bonus for specially good work, and the cost of school equipment and buildings is now met from state funds. Result grants are paid into the *Sawbwa's* treasury, and he is regarded as the superintendent of all schools in his State. Government continues to give half salary grants to budget provision. This system is at present somewhat expensive, as all teachers are imported from Burma and require higher salaries than they would be willing to work for in their own country. The cost to government per pupil during the past year has been a little over Rs. 5 and the cost to the State about the same, if non-recurring charges which have been paid from state funds be excluded. When Shans replace the Burmese teachers, which

should be before many years, the cost should be far less. The only difference between these schools and government vernacular schools is that teachers are not pensionable. The opening of a normal department at the government vernacular school, Lashio, or at the state school, Kyaukmè, is essential if we are to replace Burmans by certificated Shans." In the southern States there is a government anglo-vernacular school at Taungyi, where English, Burmese and Shan are taught. The Karens have shown a marked increase in vernacular schools. Among later immigrants there are Chinese, and Telugu and Tamil settlers from Madras. Anglo-Chinese schools, intended originally for the production of interpreters, have been started at Bhamo and Mandalay. The former failed; the latter is doing good work. The deputy inspector for Tamil schools makes the following remarks:—

"On a study of the locality of the schools, it will be found that Tamil schools have not continued to increase at the same place for a number of years. Instead of taking root and growing stronger in numbers and efficiency, after two or three years very many of them cease to exist, and another school is opened in another place and has a similar short-lived existence. And two or three years after, a new school is started under a new teacher in the first mentioned place. This phenomenon is explained by the fact that the Tamils do not live in large numbers in any one place, that as the pupils attain a certain stage of progress—the lower primary stage—they are considered as being sufficiently advanced and sufficiently grown up to help the parents in their work. In the second and third year the teacher realises that the parents of pupils have not been so liberal in carrying out as in making promises to induce him to live in their midst. It should be remembered also that the teachers themselves, if they have laid by a few rupees, must go home to South India to see their friends owing to death, marriage, etc., and that the parents themselves, if they have been prospering a little, must go to South India, or if coolies or labourers in the fields, are deceived by their employers and thus have to move in search of pastures new. Thus there is uncertainty with regard to managers, parents and pupils, and as a consequence Tamil schools do not make rapid progress. Thus we see ups and downs in the numbers of schools and pupils in attendance in the past years without any apparent reason. With a new set of very young pupils grown into school-going age, a new teacher starts a new school perhaps on the very spot where was a school three or four years ago."

His further remarks throw an interesting light on the habits of mind of the less advanced tribes and clans of the Tanjore, Madura and Tinnevelly districts, whence these immigrants are drawn. Object-lessons, geography, etc., are distasteful to them, since the parents' ambition is that their sons should be able to read aloud or chant some of their favourite ballads and religious works, and extremely difficult verses from Tamil classics, which none but the reader can understand. They are averse to the education of girls, believing that it unwomanises woman and will teach the learners to write love-letters. But the more well-to-do among them are strongly attracted by anglo-vernacular education. In the rest of India there is little to record. In Madras schools have been founded for the Badagas who live in the Nilgiris, but are not aboriginals. In Assam there are small numbers of these races such as the Ahoms, for whom special scholarships exist. Other foreign communities cannot be treated in this chapter at all. The Parsis for instance are the most educated people in India. But mention may be made of the Buddhists who, as following a religion which has now largely disappeared from India proper, may be classed apart, though many of them are in reality anything but backward. Special inspecting agency and other facilities are accorded them in Chittagong; and there is a Buddhist hostel at the Chittagong College. In the Central Provinces, the Buddhists at school have increased from 766 to 2,614.

V.—Special measures adopted.

642. The special measures taken for bringing education within the reach of the backward or isolated classes generally may be briefly described as (*a*) exemption from fees, and the distribution of scholarships and rewards, (*b*) the special hostel system, (*c*) attempts at industrial education, (*d*) special training facilities, (*e*) the production of books in hill-languages, and (*f*) special inspection. *Special measures.*

643. Not only are aboriginals and children of depressed classes exempted from fees, but they are frequently provided with scholarships (by reason not of attainment but of social status) and have books, etc., supplied free. A signi- (*a*) *Exemption from fees.*

ficant incident regarding scholarships is reported from *Madras*. Twenty-five special scholarships (as well as the free supply of books and slates) were sanctioned for Koyas in a certain taluk. But the government Agent pointed out that all Koyas are alike poor, and, being unable to understand the principles of selection for scholarships, would view any such distinction with jealousy and dissatisfaction and would probably withdraw the children to whom scholarships were not awarded. Accordingly scholarships were sanctioned for all Koya pupils in the agency; and, while the number was thus raised to 227, the amounts were halved. Presents are also given, and in special schools children are sometimes boarded and fed free. This is especially the case in *Bombay*. An example is afforded at the special schools for Katkaris in the Southern division, where each pupil receives a measure of rice on every day of attendance. Elsewhere small monthly rewards are given for attendance, and articles of clothing, etc., are distributed.

In Bengal aboriginal children read free or, if in high schools, pay half fees. In Eastern Bengal and Assam the majority of schools are free, and in the hostels free lodging and boarding are given to many pupils.

(*b*) *Hostels.*

644. A system of special hostels for aboriginals and depressed classes obtains in Bombay. A particularly successful school is that at Godsamba in the northern division, which has proved useful in producing teachers of the Kaliparaj community; another for Bhils is situated at Dohad. These are combined with training classes and will be described below. A number of other hostels or boarding schools are mentioned, where the boys obtain free board and lodging. The Scandinavian Mission maintains a boarding school for girls in the Santal Pergunnahs, and proposes to establish a set of cottage homes where the girls will live under the care of a Santali matron in a style approximating to the conditions of their village life, with a central school house. The hostel system, as already stated, plays an important part in the Lushai and Chittagong hills. There are no doubt advantages in attracting children away from their surroundings, where it is difficult to maintain a school in anything like efficiency, to central places where supervision is possible. But the method, while it appears to be successful, must necessarily be of limited application.

(*c*) *Industrial schools.*

645. Industrial schools have been established at Shillong and Kohima for the Khasis and Nagas of Assam, and are doing good work. Something has also been done at Haflong. The report remarks that the establishment of industrial schools at other centres is desirable and quotes the following from a "wellknown authority" in the Lushai hills:—"I would hope that our education (of the Lushais) may not unfit them for their after-life, which after all, is village life and agriculture. If technical education can be made to go hand in hand with schooling, so much the better. I have been for many years here, and know the Lushais as they were in their hills, when we annexed them, and should be sorry to think that one result of our educating these people might be, what it has been elsewhere, to give them a distaste for their ordinary occupations." In other provinces, too, we hear of attempts to teach improved methods of weaving to hill-tribes. Such was the first intention of the weaving station at Sambalpur in Bengal. A Gond who was trained at Sambalpur and afterwards at the weaving school at Serampur, is now employed in a hand loom factory at Hooghly; and the news of the lucrative pay he is receiving is said to have inspired many other Gonds to follow his example. In the Saran district of Bengal there are three industrial schools for members of the low caste of Doms, where they are taught basket weaving and bamboo and cane work. Ranchi has a school for Mundas and Oraons.

(*d*) *Training.*

646. The advantages are obvious of providing teachers from among the hill peoples themselves. In Madras mention has been made of four training schools for Panchamas. The Dharwar Training College in Bombay has attracted a handful of such pupils—Mahars, Konchi-Karwars and Haran-Shikaris. The hostels for aboriginals in Bombay send their pupils to training schools. A special training class was opened at Mokhada for backward communities in the northern division of that presidency, and stipends were given to pupils; but the teachers produced do not seem to have been a success. On the other hand the Godsamba boarding school for the Kaliparaj tribe sent six pupils through the training college and also itself produced 31

teachers, who are said to be doing good work. Another successful institution is that for aboriginals at Dohad in the same division. Here twenty-three Bhils are lodged, boarded and taught in a building erected by the board at a cost of Rs. 15,000. They are trained by a teacher on Rs. 50 to Rs. 60. The teachers turned out command respect " by reason of their neat and orderly appearance and their regular and temperate life." The school for Kolis, Bhils, etc., at Diwa in the Broach district also has a continuation class, which has turned out 21 boys, of whom 14 are now teachers, while four have gone on to the Ahmedabad Training College. In Bengal two *guru*-training schools are reserved for Mundas and Oraons. The missions too have their training schools. There are special schools for training teachers of hill-tribes at Jaiaw (Shillong) and Tura in Assam. It is difficult to induce teachers to attend and the schools attain only a qualified success.

647. When the language of a tribe is falling fast into desuetude (as among the Gonds), the difficulty of reducing it to script and compiling books for school use does not arise. Elsewhere this work has been accomplished to a certain extent—mainly by mission effort. A Savara dictionary, a grammar and reading books have been printed by the Madras government press. In Bengal a Mundari version of one of the Hindi readers has already been made, and it has now been arranged to translate the lower primary reading and arithmetic books into Ho and Mundari. Santali and Tibetan are also recognised as media of instruction. Money has been allotted for the translation of text-books into Khond. But all instruction above the lower primary is given in Hindi. Excellent work has been done in Assam by missionaries who have reduced the tribal dialects to the Roman script and written texts—for which government sometimes gives rewards. But it is not generally sufficient merely to teach the hill-language. 'In the higher classes the common language of the locality must also be imparted for purposes of communication and commerce with the neighbouring population. *(e) Books in hill-languages.*

648. In some provinces a special inspecting agency exists—drawn when possible from the tribes themselves. In the Chhota Nagpur division of Bengal there is a Ho sub-inspector, and there are Ho, Munda, Oraon and Santal inspecting *pandits* or assistant sub-inspectors. These work among schools specially intended for the race to which they belong. The Santal Pergunnahs have a special inspecting agency of Santals—three sub-inspectors and three subordinates. The sub-inspector of the Darjeeling hills is a Lepcha—the first of his race to matriculate. In Assam, Khasis are utilised as inspecting officers in the Khasi hills. Sometimes the missionaries are made honorary inspectors. *(f) Special inspecting agencies.*

649. On a very rough computation it may be hazarded that there exist, of the three classes named above (aboriginals in the limited sense, depressed classes and isolated communities) respectively, six millions, 42¾ millions and 4¼ millions. Of the first class about 159,000 (or 2·6 per cent.) appear to be at school; the figures supplied for the second class are insufficient to permit any conclusion to be formed. Of the third no calculation can be made. The literates in these classes may be put down as about 26,700, 1,177,700 and 274,000, or 0·4, 2·8 and 6·4 per cent. In these circumstances it is no wonder that we find the resolution on the Punjab report describing the education of the lower castes as a field of almost virgin soil, and quoting figures for certain illiterate classes, among which are criminal tribes numbering over 67,000 persons with 200 literates. The problem is one in which the educational officer is peculiarly powerless. The inspector, ranging over a large circle, can give little time to inaccessible or unschooled areas; nor is occasional attention of much avail. The personal influence which residence among those classes alone can secure is a necessary condition to their progress. The missions and the administrative officers to whom backward tracts are entrusted, who learn the languages and customs of these people, are in a position to win their confidence and by slow and patient methods to improve their lot. The best results are attained where we find these two classes of pioneers working together. Numerically the result may seem absurdly small. When due weight is given to the conditions of jungle life, social prejudice, and the savage existence from which some of these tribes are but now emerging, that *General figures.*

which has been done appears in a truer perspective. At Khonoma, where the political officer was murdered in 1879, there stands a village-school on the very site of a blood-thirsty struggle between Nagas and British troops. An English school flourishes at Imphal where, in 1891, the Chief Commissioner of Assam and his following were treacherously done to death. Some of the depressed castes, too, are now making rapid progress. The Paraiyars of Madras have now nearly three times the proportion of literates that they had ten years ago.

CHAPTER XVIII.

EDUCATION OF DEFECTIVES.

650. In the last review Mr. Orange reported that there were fifteen special schools for defectives in India situated in five provinces and that the number of pupils did not exceed 400, a figure which was disproportionate to the numbers of the defective children scattered throughout the continent. The present reports show that the schools are still confined to five provinces. The total number of schools, however, has increased to eighteen. The number of pupils in schools in the Madras presidency and in the Punjab is not mentioned, but those of the schools in other provinces total 430. The general type of school, whether for the blind or for deaf-mutes, is a vernacular school, sometimes with the addition of English, and general industrial instruction of a suitable nature. It is also noticeable that in two institutions the pupils receive, or are encouraged to receive, training to enable them to assist those similarly afflicted. As regards the paucity of schools, the social and educational conditions of India are not yet such as to have made the instruction of those who are by nature unfitted for employment appear obvious as a necessary duty of the community. The blind, the halt and the maimed are objects of natural charity in India; and the majority (though not all) of the institutions which have been established are the work of mission bodies from Europe or America. *General description.*

651. The schools in *Madras* presidency are all at Palamcottah save one. They have been reduced from five to four by the amalgamation of the mixed school for the blind at Pannaivilai with the Palamcottah schools for (*i*) boys and (*ii*) girls. These two schools continue to be managed by the principal of the Sarah Tucker College and have made steady progress in strength and efficiency. They give a general education with text-books made on Dr. Moon's system, and also contain industrial classes for boys in mat-weaving, chair-caning, basket and rope-making. Ex-pupils are sometimes trained and employed as teachers. There is also (*iii*) a school in Madras managed by the Christian Association for the education of the South Indian blind, which uses the Braille system. (*iv*) The only deaf-mute school is at Palamcottah and draws pupils, not only locally, but also from Calcutta, Orissa and Colombo. It is aided by Government and by the boards that send pupils to it, provides general and industrial education and is now under a fully trained teacher from England. *Schools in different provinces.*

The *Bombay* report shows eight such schools in the presidency with 168 pupils, against five schools in 1907. They are (*i*) Miss Millard's School for the blind in Bombay, which is doing particularly good work and has an industrial department; (*ii*) the Victoria Memorial School for the blind, also at Bombay, where tailoring, tape weaving, cane and bamboo work are taught and special attention is paid to vocal and instrumental music; (*iii*) the American Mission anglo-vernacular school for the blind at Sirur; (*iv*) the Zenana Mission aided school for the blind at Poona; and (*v*) a very small aided school maintained by the Irish Presbyterian Mission at Prantij. The Braille system of instruction is used. There are also (*vi*) the school for deaf-mutes at Bombay, mentioned in Mr. Orange's review, (*vii*) an aided school for the same at Ahmedabad, and (*viii*) a new school at Bombay called Professor Date's School for the deaf and dumb.

Inclusive of the leper asylum at Purulia, *Bengal* has four schools, with a total of 249 pupils. (*i*) The Kareya Blind School at Calcutta, founded by a Bengali Christian, teaches pupils to read by means of Braille type and to write by means of holes bored in thick paper; cane work and chair making are also taught. It is aided by government and municipal funds. (*ii*) A second school for the blind is at Ranchi and is managed by the Society for the Propagation of the Gospel; wicker work, *niwar* weaving and mat making are

taught. A few blind girls are also being instructed at other mission schools. (*iii*) The Calcutta Deaf and Dumb School teaches deaf-mutes to understand words by lip observation and to communicate ideas by articulate sounds. There is a boarding house; there is also a normal class with stipends attached for training teachers of deaf-mutes. Government and the municipality appear wholly to support the school, which cost Rs. 9,611 in 1911-12. (*iv*) The leper asylum at Purulia is managed by the German Evangelical Lutheran Mission, costs Rs. 4,840 a year and receives small government and municipal grants. The number of pupils has fallen but still remains 145.

In the *Punjab* the Railway Technical School at Lahore has a school for the blind attached to it, where industrial work and reading on the Braille system are taught.

The aided school for the blind in *Burma* has thirteen pupils and teaches reading by the Braille system as well as cane and basket work. The school, which passed through some vicissitudes during the period, has been placed in a new building and under a reorganised committee.

Photo.-Mechl. Dept., Thomason College, Roorkee.

REFORMATORY SCHOOL, JUBBULPORE.
GROUND EXERCISES.

CHAPTER XIX.

REFORMATORY SCHOOLS.

652. Reformatory schools are established and maintained in accordance with law (Act No. VIII of 1897, by which the previous Act of 1876 was repealed). The law permits Local Governments to establish such institutions or use as reformatories schools kept by persons willing to maintain them in conformity with the rules framed in pursuance of the Act. Youthful offenders, sentenced to transportation or imprisonment, may subject to rules and to the discretion of the court be sent to a reformatory for not less than three or more than seven years. *Organisation and management.*

653. During the past twelve years the organisation of these institutions has been materially changed. In 1899, their management was transferred from the Jail Department to the Education Department. (In Madras this change had taken place eleven years earlier). Thus it was recognised that they were " schools for the education and reform of boys, and not jails for their punishment by long periods of incarceration." Steps have been taken to emphasise the educational aspect. Moral and religious instruction is imparted, games are organised. Badges and rewards are given for good conduct and work. A monitorial system has been introduced. Great emphasis is laid on the industrial side of instruction with a view to enabling the boys to pursue some trade when their sentences have expired. And, while still under sentence, well-conducted boys are licensed out as workmen, gardeners, etc. Finally, in 1905 and 1906, a system of surveillance was devised through agencies other than the police over discharged boys.

654. There are eight reformatory schools containing 1,510 boys—seven maintained by government and one private school. (In general table III only seven will be found, with 1,294 pupils. The eighth is classed among private institutions.) The annual cost of the government schools is Rs. 2,49,167, all of which, save a small sum, is borne by provincial funds. Instruction in the vernacular and also industrial instruction are imparted. The subjects of industrial education will be noticed in detail in the next paragraph. Provinces that have no school send convicted boys to a school in a neighbouring province. *Institutions.*

655. The school at Chingleput, Madras, with 245 boys is an elementary combined with an industrial institution. A system of shifts has been introduced, whereby one set of boys is in class while another is in the workshops. The trades taught are carpentry, blacksmith's and metal work, weaving, tailoring, band playing, mason's work and rattan work. Little difficulty is experienced in finding employment for boys when they leave. The Bombay presidency has two schools. The government school at Yaravda has 155 boys. Behaviour is reported to be good. Of the 38 discharged in the last year, 13 had been taught gardening, 11 carpentry, five smith's work, five bookbinding and compositor's work, three painting and varnishing and one tailoring. The other, the only private institution of this kind under the Act, is the David Sassoon Industrial and Reformatory School at Bombay. It contains 216 boys and is said to be doing useful work. During the quinquennium it was removed from an unwholesome to a satisfactory site and provided with good buildings to the improvement of the health of the inmates. Bengal also had previously two reformatories, one at Alipore and one at Hazaribagh. In 1908, they were amalgamated at Hazaribagh. The boys number 461. Building additions are said to be required. Carpentry, blacksmith's work, mason's work, farming and dairy keeping, compositor's work, printing, bookbinding, painting and polishing, cane and bamboo work, shoe-making, weaving, cooking, washing and band playing are taught. External examiners tested 308 boys in the trade, handicraft and agricultural sections; and 239 passed. The United Provinces school is in the fort of Chunar. The number of boys at the end of the period was 151. Various difficulties have been

encountered and overcome. The malaria which devastated the province affected the health of the reformatory; special measures were taken and reports have since been satisfactory. There have been attempts at escape, instigated by a few incorrigibles and facilitated by the nature of the fort; the teachers and trade masters are now more continuously with the boys, and the introduction of games and other interests is calculated to minimise the desire to escape. The system of licensing out boys still under sentence had not proved successful and remedies have been suggested by a committee. On the other hand, the last report on the institution is satisfactory. Special pains are bestowed on imparting a good vernacular education which (it is interesting to learn) has enabled some to enter training classes and qualify as elementary teachers. On the industrial side, carpentry, blacksmith's work, tailoring, weaving, stone-cutting, leather work, cane work, pottery, mason's work and gardening are taught; and the school won certificates of merit and medals at the Allahabad industrial exhibition of 1911. The Punjab school is at Delhi. The number of boys has increased from 62 to 138, apparently by reason of the relaxation of the rules regarding the admission and detention of youthful offenders. The industries taught are carpentry, tailoring, weaving, shoe-making, gardening, cane and bamboo work and blacksmith's work. The amount of time devoted to trades increases as boys near the end of their detention. Moral and religious instruction is given, and the boys have drill, gymnastics and games. In the reformatory at Jubbulpore in the Central Provinces the numbers have fallen from 74 to 62. Instruction is given in carpentry, blacksmith's work, tailoring, weaving, gardening and printing.

Results.

656. The result of increased care in the management of these schools is to be seen in various ways. The reports generally speak of improved discipline and tone. Of the Chingleput school especially, we read that " great attention is given to moral and physical training and the school is more successful in leaving a definite impress on the boys who pass through it than many of much higher pretensions. The excellence of its tone is indicated by the fact that the whole school was taken in 1911 into camp for a Christmas trip to the Seven Pagodas. His Excellency the Governor visited the camp and recorded his appreciation of what he saw. The experiment, one not altogether unattended with risk, was completely successful." The most convincing test, however, of the efficacy of these institutions is contained in the records of the after-careers of pupils. So important is this subject that a statement is given below.

Careers of pupils discharged from reformatory schools in India in the five years 1907-08 to 1911-12.

Names of Schools.	Number who left the school in last five years.	Number traced.						Untraced.
		Employed.	Unemployed.	Re-convicted.	Bad characters placed under police surveillance, *vide* rule 117 of the Reformatory Code.	Dead.	Total.	
Chingleput	201	125	11	28	...	1	165	36
Yeravda	188	140	13	5	...	7	165	23
David Sassoon	297	191	23	5	...	9	228	69(*a*)
Hazaribagh	447	260	1	105	25	26	417	30
Chunar	149	79	5	8	...	...	92	57(*b*)
Delhi	90(*c*)	62	7	13	...	1	83	7
Insein	126	55	36	7	...	2	100	26
Jubbulpore	72(*d*)	49	...	7	...	2	58	14
TOTAL	1,570	961	96	178	25	48	1,308	262
Total for the previous quinquennium	1,673	949	105	138	24	50	1,266	407

(*a*) Out of 69 shown as untraced 67 had gone to their native places.
(*b*) Includes 5 migrated and 4 of whom no report was called for.
(*c*) Excludes 5 released on appeal and revision of sentence, 15 transferred to Chunar, 1 transferred to Central Jail, Lahore, and 1 ineligible for detention.
(*d*) Excludes 3 released on appeal and 6 transferred to other Schools.

The most satisfactory feature is the increased success of the measures of surveillance. In the previous quinquennium nearly 25 per cent. of the ex-pupils were untraced. In the period under review the proportion has been reduced to 16·7 per cent. The numbers of employed and unemployed, however, indicate no marked variation and (unless the effect is to be ascribed to increased vigilance) the large increase in the number re-convicted would appear to be unsatisfactory. The great majority of those re-convicted are from the Hazaribagh reformatory, and beyond the fact that its numbers are large no special reason is adduced to account for this.

Photo.-Mechl. Dept., Thomason College Roorkee.

MONASTIC SCHOOL, (KYANG), MINBU, UPPER BURMA.

CHAPTER XX.

PRIVATE INSTITUTIONS.

657. Private institutions are those which have not accepted departmental or university standards and do not submit to any public test. Their number has declined during the quinquennium from 41,192 to 39,893, while their pupils have slightly increased from 644,152 to 651,996. The figures cannot be regarded as fully reliable, because the managers are under no obligation to send in returns. The classification is uncertain. Many of the institutions cannot be looked upon as of a permanent character. They form a stock, constantly replenished but even more rapidly diminished by absorption into other classes of schools. Not only are new ones frequently opening and others closing, but there is a continual movement into the pale of recognition—the private school adopts the departmental curriculum or something approaching to it, the inspecting agency visit it and it gradually passes into the ranks of primary or special schools. Moreover, especially when, as is sometimes the case with *tols*, private institutions receive government aid, the boundary becomes indistinct between those that do and those that do not conform to the definition. Several of the reports indicate this process. And a most significant fact is the enormous increase which has taken place in the number of special institutions classed as 'other schools.' This has grown in five years from 1,716 to 5,298, and the pupils have increased from 44,226 to 145,746. *General remarks.*

658. Of the classes into which these schools are divided the first is that called advanced institutions—those, namely, that teach Arabic and Persian, Sanskrit or some other classical language. Here the numbers, both of schools and scholars, have decreased, though the falling off in pupils (from 60,792 to 55,200) is less marked than in institutions (from 3,687 to 2,634), and that in Arabic and Persian scholars more marked than in the case of those learning Sanskrit. The reasons are that the former type of school more readily lends itself to absorption into other classes of institutions, that the tendency among Muhammadans (as remarked by Mr. Prothero) is no longer to stand apart, but to use, to a greater extent than formerly, the schools established for the general community, and that the use of Persian is less common than it was. The organisation and curricula of these institutions are roughly those described in the chapter upon oriental studies, where other information, too, bearing on the present subject will be found. *Advanced institutions.*

659. In point of numbers of Arabic and Persian schools the *United Provinces* take the lead (Bengal has an almost equal number of institutions, but not much more than half the pupils) and, as regards the repute and erudition of teachers, stand far ahead. It is there that the famous school of Deoband is situated (whose pupils have risen in the five years from 267 to 600); also the Imam-ul-Madaris, the Syed-ul-Madaris, the Nur-ul-Madaris and the Islamia school at Amroha. In the Benares, Agra and Meerut divisions the number of schools has increased. But schools of Persian are steadily disappearing—a fact which Mr. de la Fosse deplores. "From this class of school came, and still come, but in decreasing numbers, the 'language teachers' of boards' vernacular schools; and though the methods of instruction they employ are often 'a stumbling block' to young and up-to-date inspecting officers, such men know their subject well as a rule and can teach it in their own fashion with success. In these *maktabs* Urdu is taught as well as Persian, but very rarely any arithmetic. In such as I have visited I have always found the penmanship to be wonderfully neat and good, and the knowledge of Persian possessed by the scholars, poor though it might in some aspects be, has given them a mastery over Urdu which is not frequently met with in a board school. But the taste or the demand for a knowledge of Persian has declined in the countryside, and schools which once flourished have closed their doors or degenerated into aided vernacular schools of a much inferior type." The (*a*) *Arabic and Persian schools.*

numbers in *Bengal* are on the decline; partly because *madrassas* and *maktabs* are adopting departmental standards and are passing into the category of special schools, partly (as remarked above) because of the greater readiness of Muhammadans to enter the ordinary schools. In *Eastern Bengal and Assam*, the fall, from the same causes, is still more remarkable, but has been far greater in the case of schools than of pupils. In this case the division in the tables of 'other schools' into *madrassas* and miscellaneous schools throws an interesting light on the subject. In addition to 125 Arabic or Persian-teaching private institutions, with 4,943 pupils (a fall of 4,162 pupils), there are 161 recognised *madrassas*, of which 113 receive aid, the expenditure on which has grown by 57 per cent., and in which the pupils have increased from 10,431 to 12,923 during the period. Sir A. Bourne reports that there is no detailed information available regarding such schools in *Madras;* they are comparatively few here and in *Bombay* and the *Punjab*. It is natural to find that the *North-West Frontier Province* has, relatively to its population, a considerable number of these institutions; but they appear to be ill-attended and the report gives no special information about them. *Burma* and the *Central Provinces*, where the Muhammadan population is sparse, have no such schools.

(b) Sanskrit schools.

660. As regards Sanskrit-teaching schools again, *Bengal* and the *United Provinces* are still conspicuous as ancient seats of learning. The former has 392 schools with 3,911 pupils, the latter 386 schools with 7,849 pupils. *Bengal*, with the famous institutions of Nawadwip and elsewhere, has its figures obscured by the fact that, under the organising influence of the Sanskrit title examinations (see paragraph 503), the number of *tols* which conform to departmental standards has increased, and that many of these institutions are now classed as special schools. The decline of private schools in the past five years has been remarkable—doubtless on this account. Regarding the *United Provinces* Mr. de la Fosse says, "Sanskrit *pathshalas* of the indigenous type—not those of which the Sanskrit College, Benares, takes cognisance—are generally speaking rather poorly attended. They are to be found where the number of the Brahman population is sufficient to create a demand for the learning of a little Sanskrit and Hindu astrology. The pupils seem to spend most of their time in casting horoscopes or divining auspicious days and times for commencing occupations. The schools may be classed as professional, for the scholars are destined to earn their livelihood by presiding at or helping in the performance of those religious ceremonies which make up so large a part of the life of the orthodox Hindu villager. In some a little Hindi is taught and also writing, but not much attention is paid to this side of the work; and it cannot be said of them, as of the Persian *maktabs*, that the knowledge acquired of the classical language makes the scholars proficient in the allied vernacular." *Madras* affords a new instance of the attempt to organise and improve such schools. The presidency appeared to be behindhand in the matter of Sanskrit education. A committee was formed during the quinquennium. Of the 270 Sanskrit schools found to be in existence it was proposed that 75 should be recognised and placed under inspection, eight being classed as colleges, 36 as advanced schools and 31 as elementary schools. Courses of study were laid down in which history, geography, arithmetic, and vernacular language were added to the study of Sanskrit. It is proposed to give aid to all save three of the colleges, and scholarships to those who read in the colleges and advanced schools. *Eastern Bengal and Assam* has only 35 schools, with 231 pupils. In *Bombay* and the *Punjab* the numbers are small. The *Central* and the *North-West Frontier Provinces* each boast three schools. *Burma* has none.

Schools for other classical languages.

661. All the ten schools teaching other classical languages are in the *Bombay* presidency and are for instruction in Zend and Magadhi.

Elementary institutions.

662. In the next class fall elementary schools sub-divided as those teaching a vernacular and those teaching the Koran. The former have increased in number from 25,108 to 26,757 and their pupils from 351,043 to 367,034. The latter have decreased from 10,504 to 8,288 and their pupils from 189,406 to 168,406. Again the tendency is noticed of Muhammadans to leave special

schools and frequent the primary institutions, and of the schools themselves to transform themselves into those of (more or less) the ordinary type.

(a) vernacular-teaching schools.

663. *Burma* is the province where vernacular-teaching schools are of pre-eminent importance. They number 16,409, and their pupils 168,154. Even these figures must, as is cogently pointed out by Mr. Covernton, be inadequate—a fact which he attributes to an insufficient inspectorate. These are the monastic schools or *pongyi kyaungs*, which still spread a net-work of indigenous education over the country. Next comes *Madras* with 3,083 schools and 67,080 pupils. The *United Provinces*, *Bombay* and *Bengal* have a fair number of such schools. The average number of pupils is remarkably high in *Bombay*—probably another sign of the strong tendency towards education in that province. Of those in the *United Provinces* the director says, "Some confine themselves to teaching reading, others add also a little mental arithmetic, and a few teach writing as well. They are of an ephemeral and migratory nature, dependent on the capacity of the teacher to collect sufficient scholars to enable him to make a living by fees. In Oudh *kaithi* is sometimes taught in place of the *devanagri* character. The more stable schools of this class are aided by the boards. They are almost invariably 'venture schools,' and if there is a manager he exists as a *nominis umbra* to satisfy the requirements of the grant-in-aid rules. He neither contributes towards the maintenance of the teacher nor does he concern himself with the affairs of the school. If he is sufficiently good-natured or if he has any children reading in the school, he may perhaps lend his *chaupal* as the place of meeting." In the *Punjab* there are 783 such schools; the figures collected by *patwaris* are admittedly unreliable. The number in *Eastern Bengal and Assam* is negligible, but has largely increased in the quinquennium, pupils having more than doubled. The *North-West Frontier Province* has only 41, and the *Central Provinces* none.

(b) Koran schools.

664. Koran schools are numerous in all provinces save Bengal, Burma and the Central Provinces. The description given by Mr. de la Fosse may be taken as typical of these institutions. They "are usually attached to mosques and are to be found where Muhammadans congregate or form a not inconsiderable proportion of the surrounding population. The *pesh imám*, the prayer leader, is almost always the school teacher as well. The scholars commence by studying the Arabic alphabet and as soon as they can read they are made to recite *suras*, or chapters of the Koran. Neither writing nor arithmetic is taught. So far as my experience goes instruction is usually confined to reading and memorising, but sometimes an attempt is also made to explain the meaning of what is read. This, however, is rare. The schools are purely theological and they could not be made to serve the purpose of secular education." Eastern Bengal and Assam has 1,505 schools with 29,114 pupils, which represents a fall of nearly 50 per cent. and 41 per cent. respectively—due, the report says, to the efforts made by the department to bring the schools under inspection and add some elements of practical utility to the course; this leads to change in classification.

Value of elementary institutions.

665. Before leaving the elementary institutions, which form far the largest class of private schools, it is necessary to quote some opinions as to their value. The tendency, as has been repeated throughout this chapter, is for the indigenous school to accept departmental standards. Inducements, says Sir A. Bourne, have been held out to them to seek recognition, and local boards and missionary societies have taken them under their management. The *mulla* schools of Sind and the *maktabs* of the *Bengals* have been aided and organised. In *Burma*, "persistent efforts have been made to conciliate the *pongyi* and to utilise the *kyaung* as a common instrument of vernacular education." There is, however, a school of opinion which would maintain these places as the *pièce de resistance* of elementary learning, as an economical agency for breaking down illiteracy, as admitting of religious instruction and as appealing strongly to the oriental mind. Much as one may mourn the passing of a mediæval and picturesque institution, expert opinion warns against a doctrine which, if pressed, would prove obscurantist. "As has been repeatedly pointed out," writes the director of Burma, "the usual teaching in private monastic schools comprises a set of '3 R's' peculiar to Burma,

viz., 'Reading, Writing and Religion.' It does not ordinarily include arithmetic—or any other subject than those stated. The system does not contemplate the education of girls, for whom separate provision will be necessary. Nor does it provide for the instruction or training of the monks as teachers. Lastly, the traditions, if not the rules, of the more orthodox militate against the Erastianism implied in any acceptance of state supervision and interference." The director of the United Provinces also says it is indisputable that the course of instruction, however excellent in some instances and in some directions, yet regarded as a whole is too narrow for a system of popular education, and the indigenous school does not conform to the definition of what an elementary school should be. Sir A. Bourne repeats his opinion that "although one may regret for some reasons the disappearance of the *pial* schools (these are private schools in Madras) as such, there is little reason to doubt that they are for the most part improved by conforming to departmental standards now that so much freedom is accorded to them in regard to the work they undertake." Quite apart from any question of efficiency, the existing number of such schools is too small, the possibility of their substitution for recognised institutions too problematical to permit of any such scheme. Only 9·6 per cent. of the total of pupils under instruction are reading in private schools (see supplemental table no. 231). In some provinces the indigenous system has never obtained to any large degree. Where it does so, the departments utilise it, and, so far as possible without spoiling its essential features, adapt it to modern needs. An attempt to resuscitate it would not merely be retrograde, it would probably be highly unpopular and might end in the closing down of institutions which are now appreciated.

Other institutions.

666. The third class is that of 'other schools not conforming to departmental standards'—not to be confused with the 'other schools' which form a subdivision under special school education. These are a heterogeneous lot. In *Bengal* they are distinguished from elementary schools by teaching a somewhat more ambitious curriculum and in some cases including the study of English or of an oriental classic; in the same province primary schools which conform to departmental standards but have less than ten pupils also fall under this class; so do the Mahakali *pathshalas* and the schools under the Bengal National Council of Education. An attempt may be made to subdivide these institutions as (*i*) those which desire to adopt a curriculum or a mode of school life different from those pursued in the ordinary schools and generally with a tendency towards the old ideals of Indian education; (*ii*) indigenous trade schools; (*iii*) schools (generally English-teaching) which desire to stand apart from inspection and control.

(a) schools with distinctive curricula.

667. To the first class belong the Mahakali *pathshalas* in Bengal. Here girls are instructed in a special curriculum largely composed of Sanskrit. Another instance is the *gurukul* at Hardwar. It is described as the notable educational stronghold of the Arya Samaj. Here also Sanskrit is a staple subject of study. The underlying principle of this institution is the seclusion of the pupils for a number of years from the world, though utilitarian instruction is prescribed. A new branch of this school has recently opened near Multan in the Punjab.

(b) trade schools.

668. Many private schools are more or less of a vocational character, since the advanced institutions produce teachers, *purohits* (family priests), preachers and *baids* (doctors). Among 'other schools' an interesting specimen is the *mahajani* school. These are widely scattered throughout the United Provinces and are reported to show a large increase in the Rawalpindi division of the Punjab. "Their first purpose is to teach *paharas* and *gurs*, *i.e.*, multiplication and fractional tables and rules for rapid mental calculations. Some go no further; but the better ones add reading and writing in the *mahajani* character for the purpose of keeping *bahikhatas*, account books in the native system of book-keeping, and for simple business letter-writing. The scholars find employment subsequently as *gumashtas* or *munibs*, that is, as accountants in shops. Such schools are indispensable in Indian rural economy and would continue to exist whether aided by the state or not. But they are not schools for general education, being merely trade-schools for the benefit of a particular class." No excuse is needed for quoting at length a further description from Mr. de la Fosse's report of two

schools of this not very important or widely prevalent kind of institution, not only because of its vividness, but because it sheds a flood of light upon social custom and growing public opinion on recognised schools. "Within earshot—for the indigenous school is a very noisy institution—of a board's primary school, huddled in a small *chaupal*, I found an aged teacher and about twenty very young scholars working at a system of mental arithmetic which made the brain reel to contemplate. By means of a very ingenious but wholly mechanical set of rules they were doing in their heads petty calculations of great intricacy. There were no books nor *takhtis*, nor any school appliances whatever. Here was an institution of such hoary antiquity that it belonged to an age when writing was not in use and when necessity compelled men in default of it to invent devices for making complicated calculations in their heads. Like the marsupials or the duck-billed platypus it had managed to survive into a later period. It still had its uses though it had degenerated into a mere trade accomplishment; for the youthful *bannia* was set to learn therein and his parent was prepared to pay no less than four annas a month for him to do so. When the teacher had taught his present little band of scholars how to use his mental arithmetic with sufficient proficiency he would move on, he said, to another village. His life had been spent in such migrations and the usual period of his halts was from two to three years. He complained that the work was hard and tedious and very badly paid and he looked as if 'sharp misery had worn him to the bones.' The other school is of a more stable nature, and I have known it off and on for nearly fifteen years. It probably has flourished for many generations. It is situated in a country town largely inhabited by small traders, and is sure of a perpetual succession of young *bannias*. Here in a building, which serves also as the teacher's private house, in the verandahs and the courtyard sit the scholars. The noise is almost deafening, for there are usually between sixty and seventy in attendance. When I first saw it there were over a hundred. In addition to much the same system of mental arithmetic, which forms the bulk of the instruction, the boys are taught to write words and figures in a character which has a rather ragged appearance and a disreputable likeness to Hindi. Here again no printed books are used and nothing else is taught but to write and keep accounts and be a 'ready-reckoner.' The district board, by a rather generous interpretation of the rules, has lately given the teacher a grant-in-aid; but he told me with some feeling that times were bad, for the attractions of the neighbouring board school had begun to tell upon his clientèle. The local *bannias* were, in short, beginning at last to appreciate the system of instruction given in the public elementary school."

669. The third subdivision (those schools that from inefficiency or some other cause do not seek inspection and recognition) differs from other kinds of private institutions in being essentially modern and designed to meet modern requirements. In the *United Provinces* they are called 'city schools.' "In large cities," writes Mr. de la Fosse, "where European influence is beginning to be widely felt and in cantonments where the European community is numerous enough, there is springing into existence a class of school that is intended to serve the needs of those who come into contact in their daily lives, whether in service or in business, with the western world and its ways. These city schools teach a smattering of English along with some Urdu or Hindi and a little arithmetic in English figures. They are very far from being efficient means of elementary instruction, but the amount of education acquired is apparently just enough for the scholars' purposes, and the inclusion of English in the curriculum of studies, badly though it is always taught, is much appreciated." In the *Punjab* they are spoken of as unrecognised middle schools, and two or three are to be found in each commissioner's division. In the Hoshiarpur district of Jullundur, however, no less than seventeen of these schools have been opened by various religious societies, chiefly the Arya Samaj. The buildings are reported to be make-shift or non-existent, the equipment meagre; the headmaster has seldom passed a higher standard than the entrance; the pay of the staff is small. "They have sprung up," says the inspector, "often in couples—an Arya and a Khalsa school at Mahalpur, an Islamia and an Arya school at Dasuya, a Sanatan Dharm and an

(c) *anglo-vernacular schools.*

Arya school at Patti, and so on in defiance of actual local needs. As they are almost always badly housed and badly staffed, and beguile boys from local board schools through prospects of rapid promotion, the private generosity that supports them might have been better directed to improving the existing board school than to injuring its pupils. Such schools establish their numerical position by disregarding inter-school rules, which they then observe in order to claim recognition, and they are said to affect the discipline of board school pupils, who resort to them when they tire of their present teachers." There are some unrecognised anglo-vernacular schools in Rangoon—three maintained by Muhammadans, two by Chinese; there is also the Theosophical Society's school. Mr. Coverton repeats his previous note of warning about the dangers and difficulties involved in the existence and multiplication of unregistered or even unknown anglo-vernacular institutions, but states that, with the present inadequate staff of the department, no great expansion of work among private schools is possible.

National schools.

670. Schools of the unrecognised type have sometimes been used for the spread of unwholesome political doctrines among the pupils. The Samartha Vidyalaya at Talegaon near Poona was declared in 1910 to be an unlawful association under the Indian Criminal Law Amendment Act of 1908. In *Bengal* and *Eastern Bengal and Assam* a number of institutions called national schools sprang up in 1905-08. Some of them were established for the reception of pupils expelled from recognised schools for outbreaks and demonstrations connected with the anti-partition agitation, or in consequence of other action taken against disorderly institutions, or by teachers dismissed for misconduct. A certain number obtained recognition and aid from the Bengal National Council of Education, a body which included the names of well-known public men in Calcutta and elsewhere. There seem to have been about eleven such schools in *Bengal* and forty in *Eastern Bengal and Assam*. The curriculum of the larger schools was outwardly not unlike that pursued in ordinary high schools. Some kind of technical instruction was often added. The history of several of these schools was marked by grave disorders. In two of them (both of which appear to have been aided by the Council) some of the teachers and boys were sentenced to imprisonment or fine for assault or obstructing government servants in the discharge of their duties. The National College and a certain number of these schools still appear to survive; but their political activities are not now prominent.

CHAPTER XXI.

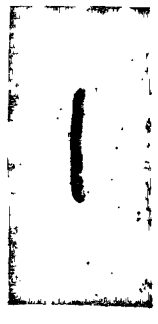
EDUCATION IN SPECIAL AREAS.

671. It has been said that the figures dealt with in the present report exclude native states and agency tracts, save (generally speaking) those which are in relation with local Governments. The agency tracts (that is, small isolated portions of British territory administered by political officers) add little to the figures (with one exception). But it is necessary to add a few words about educational arrangements in Ajmer-Merwara, British Baluchistan, Hyderabad, and the Andamans.

672. *Ajmer-Merwara*, as well as the Mayo College described in the chapter on the education of chiefs, has a small arts college affiliated to the University of Allahabad up to the B.A. The total number of institutions is 222; pupils have increased during the quinquennium from 9,230 to 11,134, and expenditure from just over one lakh to Rs. 1,71,227. In *Baluchistan* there are a high school (the Sandeman High School) and a European school. The total number of schools is 157 with 4,120 pupils and a direct expenditure of Rs. 74,684. A small training class has been opened with some success. Education is controlled by the director of public instruction in the North-West Frontier Province. The civil and military station of *Bangalore* has already been mentioned as an important centre for the education of the domiciled community. Schools for Indians are also numerous, and some 9,000 out of a population of 100,000 are at school. With the aid of imperial grants, there is at present a good deal of activity in building municipal schools; and a class for the training of teachers is being organised. The residency bazaars and cantonments of *Hyderabad* contain thirteen secondary schools for Indians, of which the most important is the Mahbub College at Secunderabad. This is exclusive of schools for Europeans. There are also 17 public and 62 private primary schools. Out of a population of over 130,000 nearly 6,000 children appear to be attending school, of whom nearly half are not in recognised schools. Inspection is performed by His Highness the Nizam's director of public instruction and his staff. *The Andaman and Nicobar Islands* have five schools, including an anglo-vernacular school. They are attended by 152 boys of free parents and 36 of convict parents. *Agency tracts, etc.*

In 1912, the Government of India gave grants amounting to Rs. 2,07,500 capital and Rs. 1,000 recurring for the improvement of education in agency tracts, with a promise in future years of Rs. 47,000 recurring.

673. Education in native states which are in direct relation with the Government of India does not fall within the scope of this report. These states manage their own educational affairs and maintain their own staff. The figures for most of the states which are in relation with Local Governments are included in the reports. Such are the states of Kathiawar and the feudatory and tributary states of Orissa, Chota Nagpur and the Central Provinces. (Figures for all the Orissa states are not available.) In Kathiawar states of the first and second class exercise independent control over their educational departments while the schools of minor states are managed by the agency educational officer who reports to the Agent to the Governor of Bombay. In Orissa there are advisory educational officers under the Government of Bengal and inspecting officers under and paid by the states concerned. *Organisation in native States.*



CHAPTER XXII.

TEXT-BOOKS, LIBRARIES AND PUBLICATIONS.

674. There are a few miscellaneous matters to which allusion has been made in the course of this review, but whose fuller treatment it was convenient to keep for a special chapter. They comprise the subject of text-books, of libraries and other necessary adjuncts to an educational system. The subject which might naturally figure here—that of conferences—has been omitted in this place, since it has received sufficient treatment early in the report. *Scope of the chapter.*

I.—Text-books.

675. Save in colleges and classes of high schools working for the matriculation, the text-books or a choice of books are prescribed by government or the department. Ordinarily a list of recognised text-books is maintained in each province and is brought up to date from year to year. Either special books are annually selected for different standards out of this list, or schools are left to make their own selections. The practice varies. For purposes of scholarship examinations some uniformity is required. But it is not essential that the same book should be prescribed in every division of a province. In Bengal and Eastern Bengal and Assam prescription by divisions has been usual in the case of vernacular schools. In Bengal each inspector is now permitted as an experimental measure to prescribe books for middle and primary scholarship examinations. *Prescription of text-books.*

In choosing text-books for the prescribed list, and also in compiling suitable lists of prize and library books, the local Governments seek the aid of text-books committees. In the Punjab the committee also produces books. Elsewhere, when the necessity of producing books arises, government ordinarily constitutes special committees.

676. Each of the larger provinces possesses one or more of these text-book committees. They consist of representatives of different interests. Thus, *Bengal* has three committees—one at Calcutta which considers books written in English and Bengali, one at Patna for books in Hindi, and one at Cuttack for books in Uriya. In the *Central Provinces* the number has been reduced to one, the separate committee for Berar and the sub-committees in three of the other divisions having been abolished. The work of examination of books which some of those committees have to discharge is sometimes very onerous. The *modus operandi* is generally through circulation of books for opinion. In the *Bombay* report a complaint of the vice-principal of the Poona Training College is quoted to the effect that the work proceeds very slowly, owing "partly to the leisurely manner in which the members of the book committee do the opinion work, and partly to the fact that only one copy of a book is available for circulation among the members." In *Madras* the committee is divided into sub-committees; and in 1909 the number of members was raised to facilitate this division. The *Punjab* committee (a particularly active body) has eight sub-committees and also holds forty to fifty meetings annually. In *Eastern Bengal and Assam* a Central Text-Book Committee was constituted in 1907. Sub-committees were retained for the Assam Valley, the Khasi and Jaintia Hills and the Garo Hills. To facilitate the despatch of business, the central committee has itself been divided into sub-committees for the examination of different classes of works. *Text-book committees.*

677. Of text-books for use in colleges and English secondary schools it is unnecessary to speak. Here works of universal acceptance are adopted, and suitable editions are produced by private firms in sufficient numbers. The universities, the text-book committees and local Governments discriminate and prescribe. But, save in rare cases, it is unnecessary for these authorities to produce books for this purpose. As one of the exceptions, it may be *Higher text-books.*

mentioned that the Calcutta University has produced and prescribed its own Sanskrit grammar.

Elementary text-books.

678. With vernacular books and English or anglo-vernacular texts for lower classes, the case is different. Not only must the current languages be used, but the treatment must be such as will appeal to Indian children. Sir George Roos-Keppel, Chief Commissioner of the North-West Frontier Province, complains of the unsuitability of English texts and says that he has in many cases had to listen patiently to recitations which appeared to him to be absolutely unintelligible nonsense, although they were correct according to the book. "Moreover, owing to their antiquity, the text-books contain a good deal of incorrect information; for example, a lesson on gold read in the fourth primary class dwells at a great length on Californian gold, mentions Australian gold as of recent discovery and omits all mention of South Africa. Most English readers in use are not suitable for Indian schools, and this is especially the case with regard to the poetry they contain. Neither lullabies to infants nor poems on English flowers are attractive subjects for recitation by Pathan boys of 16 years of age, yet, owing to their presence in the official text-books and to their easiness, they are frequently selected by the teachers for this purpose." For obtaining suitable simple books in English and vernacular two methods are generally pursued. In the more advanced provinces the production is sometimes left to private firms. In the less advanced (and in certain subjects in almost all provinces) books are specially written to order, and the production is given to special firms. A mixture of the two is the prescription of certain definite lines or model books along which authors and publishers work in competition. In any of these cases, the books are examined by a committee and prescribed by government. The system of production by government, or rather the granting of a monopoly to one or more firms for different kinds of publications, is apt to be unpopular with other firms. But the monopoly system has undoubted advantages from the point of view of the pupil and the pupils' parents —who after all are the people chiefly concerned. Under this system, where the sale of a very large issue is assured to the firm, the work can be thrown on the market far more cheaply than if the production were divided among competitors each of whom might secure a certain custom among the schools but none to the extent which permits efficiency to be combined with low rates. When the work is given to European firms, complaints are more justifiable. But Indian firms are largely used, and, when this is not so, it is generally because tenders have been openly invited and those submitted by European firms are more favourable. In these cases, consideration of the customer's interests must weigh; and such firms ordinarily produce their editions in India, by Indian labour and (sometimes as a condition of the bargain) on Indian paper. Indian printing and publishing firms, however, are fast improving and efforts are made to utilise them wherever possible. The production of illustrations still sometimes presents a difficulty.

Selection and production.

679. The difficulties of the problem are increased by various causes. The production of cheap school literature is becoming a favourite occupation. It is encouraged by the chance of a lucrative return should a single work out of many be adopted for general use. The number of books produced and examined by the text-book committees is rapidly growing and throws an increasing strain upon those bodies. In 1902, the *United Provinces* committee had only 191 books to examine; in 1911 it was called on to criticise 741 works. In *Eastern Bengal and Assam* the central committee alone examined 1,742 works during the quinquennium; the *Punjab* committee examined 2,258. It is difficult to discourage; and, as Mr. de la Fosse says, the importunity of authors, who have sometimes very remarkable ideas of the literature required for school boys, and the competition of publishers to get their wares approved, have combined to render membership of the committee no sinecure. The work of critically reviewing and selecting the best is difficult, responsible and delicate. But the trouble is intensified in the case of vernacular books by other considerations. These books will be largely used by very small children; and few authors are acquainted with the conditions which this fact imposes. Again, however carefully the author is

selected, his language can hardly escape severe criticism. This is due to the absence of a universally accepted literary standard. An instance in point is the fate of the Hindi and Urdu text-books produced in the *United Provinces*, of which something will be said presently. But instances also abound elsewhere; and it may safely be said that, whether a committee rejects or whether it adopts, the result will be a chorus of dissatisfaction. Government frequently attempts the writing of vernacular books by selected authors and committees. Some description is necessary of the production of these works and of manuals and other books not ordinarily obtainable in a satisfactory form by other means.

680. The provinces in which text-books have been mainly left to private enterprise are Madras, Bengal, the United Provinces and Eastern Bengal and Assam. But even here there are exceptions. In *Bengal* it was found necessary to modify the existing system. Private authors and firms had hitherto prepared books in accordance with the vernacular scheme of 1901 (see paragraph 285). These were found so unsatisfactory that it was considered better for the department to undertake the direct preparation of the text-books intended to be read under the revised syllabuses. Accordingly in 1908-09, the same committee which had framed the new curriculum selected authors to prepare readers and arithmetic books for the lower vernacular classes. Schools, however, were not limited to the books so produced; for these were intended to serve as models for private authors. Two teachers' manuals—the junior and the senior—were also compiled by selected authors and edited by an inspector of schools. Government also chose authors for the preparation of a science reader on natural phenomena and volumes on animal and plant life for the higher vernacular standards. These, too, were to serve both as texts and as models. These productions were completed and all save one had been brought out in Bengali, Hindi, Uriya and Urdu before the end of the quinquennium. The lower standard texts are now to be translated or adopted in Nepali, Tibetan, and the aboriginal languages of Santali, Mundari, Oraon and Keri. A special teachers' manual for *maktabs* was also published. Readers for Muhammadan girls are also under revision by a special Muhammadan committee. The production of readers for higher standards is still left entirely to private enterprise. The lack of suitable texts on geography for these standards is however still regarded as a defect. In the *United Provinces*, a committee was appointed which after five years' labour produced in 1907 parallel readers for use in Hindi and Urdu-teaching schools. The series was at once assailed with a storm of criticism, which fell especially on the simplicity both of language and of subject matter. A joint committee, formed to consider these matters, found that, while many of the criticisms were baseless, the books were not altogether suitable as a preparation for further literary study. The question of revision, however, was dropped in view of the general reconsideration which the primary curriculum has recently undergone; and the preparation of a new series has been entrusted to the Rural Education Committee. The director is not optimistic as to the possibility of devising a common language which will not seem to favour one or other of the rival vernaculars, but he hopes improvement from the fact that the lessons are not to be translations of English originals, but composed in the first place in the language in which they are to be produced. The report also speaks with dissatisfaction of the readers for vernacular middle classes and attributes to their lack of literary merit the poor knowledge of language among those who have continued their vernacular studies. In *Eastern Bengal and Assam* considerable encouragement was given to local authors through the adoption by the department of works locally produced. The book trade in Dacca increased enormously. At the same time, a series of vernacular readers produced under the supervision of government was partially introduced; the department itself published an elementary book on Bengali grammar; and various school manuals and a geography were compiled under its orders. A matter of real difficulty in this province is the preparation of text-books for hill-tribes (see paragraph 647). Quite recently Mikir readers and an arithmetic have been prepared by the missionaries; the Garo text-books have been revised; and a geography and a teachers' manual have been written in that language.

681. As regards other provinces, the elaborate operations of the committees for the production of texts in the various languages of *Bombay* have been described by Mr. Covernton and in the last review. In 1907-08 readers in the three vernaculars of the presidency were issued; in 1908-09 appeared other volumes in Marathi, Gujarati, Sindhi and Canarese. Further new readers and revised editions were published in 1909-10. The price of the books has been reduced. The Text-Book Committee of the *Punjab* has always engaged in the production of books and maps in cases where private enterprise is not likely to come forward. Its work during the quinquennium has been characterised by two features—a more liberal attitude to authors and publishers at the risk of the displacement of the committee's own works, and a widening of activity—as the result of a more favourable contract with the committee's publishers. On the one hand, while it is considered probable that some years must elapse before India will be in a position to compete on equal terms with the west in the production of school books in English, it is believed that the policy of the committee will do much to encourage local effort in this direction. On the other hand, the report states that private enterprise in the preparation of vernacular texts is yet to develop. "The number of text-books published privately in the vernaculars, and designed to meet the requirements of the Punjab curricula, is still comparatively small, and only a certain proportion of these are of sufficient merit to justify the committee in recommending their adoption. Want of accuracy, inferiority of printing and binding, excessive price, and even piracy of the rights of other publishers and authors are among the reasons for the rejection of some of the publications submitted. In these circumstances the committee has not been able to lessen its own direct responsibilities in the preparation and publication of vernacular books. The Text-Book Revision Committee, which was appointed by government in September 1905 for the purpose of improving the vernacular text-books used in the province, was dissolved in January 1908, having sat for two years and four months. The most valuable work accomplished was the preparation of a new series of readers in Urdu and Punjabi for primary schools for boys and girls, and courses of reading in Arabic and Sanskrit for the five secondary classes. Nineteen of the volumes prepared have already been published, and have been very favourably received. In all 40 new books have been published during the quinquennium. These include fourteen vernacular readers, four courses of reading in Hindi and Punjabi for students under training, five Arabic readers, two geographies, two science primers, Persian and Arabic grammars, a Sanskrit reader, a text-book on Urdu composition for primary classes, and manuals of kindergarten and school management in Hindi and Punjabi, translations of works already published by the committee in Urdu." Other works too numerous to mention were published by the same committee. It is interesting to find among these some vernacular translations of books on hygiene. Special importance is attached to good illustrations; and an arrangement has been made for the production of an Urdu edition of the "Child's World in Pictures." A recent departure is the subsidising of the Punjab Religious Book Society for the translation of English standard works; "John Halifax, Gentleman" has just been published in Urdu. The committee have a regular contract with a Lahore publishing firm (Messrs. Gulab Singh & Sons) and have recently renewed it on terms favourable to themselves, receiving an enhanced royalty, while the price of most works is fixed at a uniform rate of 1,000 pages per rupee. The resolution of the Local Government remarks the admirable work which this committee is doing. From 1910 to 1912, a special committee in *Burma* sat for the purpose of completely revising the series of vernacular readers. The books prescribed in the *Central Provinces* have been found unsatisfactory and arrangements are being made for the provision of improved works.

Supply of books.

682. A few years ago, the supply of a sufficient number of books was a difficulty both in towns and still more in outlying villages. The difficulty has now largely disappeared. The Calcutta School Book Society, formed for the distribution of school books and appliances, had received a subvention from government since 1821. It was considered that the society was no longer

required and that it interfered with private trade. The society was dissolved by a resolution of its own members in the last year of the quinquennium. More and more, the matter is being left to local and private arrangement; and book-depôts, which used to be a common feature for the supply of vernacular literature, are becoming a thing of the past. In the United Provinces they have been completely abolished; and, though difficulties still sometimes arise, the market appears to be more accessible and satisfactory.

683. In recent years considerable attention has been bestowed on the production of improved drawing books. The arrangement in Bengal whereby such books were examined by the Central Text-Book Committee was found unsuccessful; and a special committee was constituted to advise on their selection and on kindred questions of art. A set of drawing books on a novel plan was also prepared at Dacca for Eastern Bengal and Assam. *Drawing books.*

II.—Libraries, publications, etc.

684. The subject of libraries has already been treated in various chapters. Of colleges it may be said that the majority of them are too young to have acquired a steady and matured collection of books. Some of the long established colleges of Bengal, such as that at Serampore and Bishop's College (with its rare collection of curious manuscripts), are exceptions to the rule. The larger government colleges, too, have respectable libraries; and considerable pains have recently been bestowed on their improvement. Colleges of these kinds not infrequently possess libraries of anything from 5,000 to 20,000 volumes. As to schools, their libraries differ greatly in value. The Eastern Bengal and Assam report says :— *Libraries.*

"Those attached to Government schools are generally well supplied with books. Most of the aided and unaided schools, however, have nothing worth the name of a library, and some of them have not even the necessary books of reference. Apart from the question of funds the value of a school library as an instrument of education has not as yet been properly realised in these schools. 'Probably,' observes one inspector, 'the teachers are responsible to a great extent for this state of things. They can do a good deal in stimulating the desire for private reading among their pupils. But it is a matter of regret that most of our teachers are not themselves well read, and, until there is enthusiasm for good literature among the teachers, it is not likely that much taste for reading anything else than text-books, or those books suggested for reading by the university, will be evident among the pupils of our high schools.' In middle schools the libraries consist of nothing but text-books, and though last year an endeavour was made to improve this state of affairs by the circulation of a list of books and appliances which every such school should possess, the attempt proved a failure owing to financial difficulties."

685. The subject of public libraries and museums is not treated in the reports. (Something has been said about collections of manuscripts in chapter XII.) Large cities occasionally possess good libraries—such as the Imperial Library at Calcutta. And there are 39 museums—largely but not wholly archæological. In smaller towns and villages libraries are conspicuous by their absence (though in parts of Bengal the larger villages have reading rooms; and the Bombay presidency has 95 registered libraries). This lack of books is one of the reasons for the transitory influence exercised by vernacular education. An interesting experiment is reported from the Central Provinces. "The provision of small libraries of interesting information and tales written in simple language seems the first and easiest step to take, and should not prove unduly expensive. In the Balaghat district village libraries are maintained from local resources. In every village school there should be a few books interesting and simple, for the use of the villagers, and every effort should be made to ensure their use. The combination of a library with the school should prove the first step towards the prevention of a lapse into illiteracy." Museums are occasionally used for excursions. Since the close of the quinquennium a scheme has been formulated for putting the Indian Museum in Calcutta to organised educational use. Small museums in schools are still rare; but a training institution will not infrequently possess one. The Madras report says that, while they are becoming increasingly common, "there is little indication of the development on the part of pupils of the habit of making systematic collections for them of natural objects, they generally *Public libraries and museums.*

stop short at presenting to the museum any object they think curious that they happen to come across. The pursuit of hobbies, so common among English school boys, is still rare even in schools for Europeans."

Educational publications.

686. Among educational publications there are college magazines (already mentioned), and sometimes vernacular papers are produced for the special consumption of primary and middle schools. There are also educational magazines of a superior type for general reading. Such (among several) are the "Educational Review" (Madras), "Indian Education" (Bombay), the "Bengal Educational Journal," the "Punjab Educational Journal" and the "Collegian."

The Bureau of Education in the Government of India has published a small series of reports, partly on Indian topics, partly on developments studied in other countries under the system described in paragraph 489. The series now comprises six volumes. The subjects treated are rural schools in the Central Provinces, vernacular reading books in the Bombay presidency, the educational system of Japan, miscellaneous matters published as the result of furlough studies, the training of secondary teachers and educational buildings in India.

Encouragement of authorship.

687. Government offers rewards or assistance by way of purchase of copies to meritorious authors of vernacular books or works on oriental classics. Such concessions are necessarily made only in rare and special cases and after careful enquiry. In the Punjab both Government and the text-book committee contribute for this purpose, and the award is made by the latter. Competition is keen. Forty-six awards have been made in the last three years.

III.—Visual instruction.

School pictures and lanterns.

688. Increased attention is now paid to the production of good pictures for schools. The problem is not an easy one, since the locally-made article is apt to be crude, and the imported article is expensive and not always suitable for Indian consumption. The delivery of an object lesson, say on the Indian cow, is not facilitated if the teacher has to illustrate by a daub which might equally well be a buffalo or a bison, or by an elaborate representation of an Alderney cow in a rich English pasture. There is considerable scope for striking out a new line here; and the Government of India brought the matter to notice in 1911. Lanterns are now used by teachers and to some extent by touring officers. In 1907, the Government of India provided sets of slides to each major province. Some Local Governments have purchased a considerable number of lanterns and slides. In the Punjab a large stock of slides is kept in the Lahore Museum. They are in constant circulation—largely to schools, one of which received fourteen sets in a single year. This is much appreciated by schools in the province. Recently an itinerant lecturer has also toured round the principal secondary schools. And, in Lahore itself, a course of lantern lectures, many of which are delivered by specialists, is annually arranged for school and college students. In Eastern Bengal and Assam a lantern was supplied to each inspector in 1908. In succeeding years the number both of lanterns and of slides was gradually increased, the latter comprising such subjects as astronomy, geography and nature study. Lanterns and slides are lent to large schools that do not possess their own. In two divisions inspecting officers carried lanterns on tour and delivered lectures at schools of all kinds or in central villages.

GENERAL INDEX.

	Vol. I. Pages.	Vol. II. Pages.
A		
Aboriginals—		
education of	255—259	
exempted from fees	261-262	
presents and free boarding and feeding allowed to	262	
Abors	256	
Accounts, village, taught in primary schools	125	
Acharya examination	205	
Ackland, T. G.	15	
Act, Indian Museum	8	
Acts, Local Self-Government	10	
Acts, Universities	xii—xiii, 41, 51	
Adam's reports on vernacular education in Bengal and Behar	3, 6	
Advisory Committee in England	70	
Affiliation—		
list of affiliated colleges		212—222
procedure as to	46	
Affiliating Universities, jurisdiction of	xiii, 43	
Age—		
for admission to Forest College, Dehra Dun	167	
matriculation	81	
of pupils		55
school	139—140	
Agency tracts	277	
Agra College		90
Agra Medical School		172
Agricultural College, Cawnpore	26	
Agricultural College, Lyallpur	26	
Agricultural colleges and schools, statistics of	xi, 58, 159—166	83, 258
Agricultural degrees	163	
Agricultural education	xi, 158—166	
Agricultural instructors in training schools	200	
Agricultural libraries	164	
Agricultural readers		463
Agricultural text-books	164	
Agriculture—		
degree and examination		74
post-graduate course	159	
practical		190
not taught in primary schools	xi	
Agriculturists—		
concessions to	133	
curriculum for	125, 136	
education of sons of	135, 136	
Ahoms	256	
Ahsanulla School of Engineering, Dacca	156, 182	
Aid, system of (see also Grants)	vii, 84—87, 119—120	107—124, 141—160
Aided colleges	60—62	
Aided schools	iv, vii, 73, 74, 78, 82, 85—87	
Aitchison College, Lahore	227—230	
Aiyar & Co.'s business college, Bombay	185	
Ajmer, Mayo College	xiii, 227, 228, 229	
Ajmer-Merwara	277	
Aligarh, proposed Moselm University	xiii, 25, 43, 250	
Alimurad (Sir) scholarships	248	
Alipore Reformatory School, Bengal	267	
All-India Muhammadan Anglo-Oriental Educational Conference	245	
All Saints' Diocesan College, Naini Tal	244	
Allahabad conference	ii, vi, ix, 111, 115, 134, 175	
Allahabad Training College	191	181
Allahabad University	8, 41, 44	
chairs of Indian History and Economics	56	
law college and staff	148	
medical faculty	41	
Allotment grants		107—124
American Evangelical Lutheran Mission College, Guntur		87
American Free Baptist Mission	181—182	
American Mission College, Madura		87
Ananda Mohan College, Mymensingh	69	92
Andamans	277	
Anglo-Arabic High School, Delhi	251	
Anglo-Indian Children's Relief Association	234	
Anglo-Persian departments in *madrassas*	251—253	
Anjumani-Muffidi-Ala-i-Islam, Madras	180	
Anjumans	210	
Apprentice system	x, 173, 175, 181, 184	
Apprentice training classes	199	
Apprentices, night schools for	236	

	Vol. I. Pages.	Vol. II. Pages.
Arabic—		
departments in *madrassas*	252—253	
library at Bankipur	210	
at the M. A. O. College, Aligarh	205	
school, Deoband	205	
schools	252—253, 271	289, 291
subjects taught	203—205	
Arabic and Persian schools, private	271—272	
Arboriculture	164	
Archæological survey reports	210	
Archæology	x, xvi, 210	
and the Oriental Institute	210	
scholarships in	208	
Architecture, teaching of	x, 184	
Area and population	1	15, 197
Area served by schools	v, 106	245
Art, Indian, preservation of	x	
Art schools	x, 183—185	
statistics of		260
Artisans—		
children of	130	
industrial education	180—182	
schools for	x, 175, 178—182	
Arts colleges	59—70	87—93, 212—230
buildings		87—93
characteristics of	62, 63	
community of life, debating societies, etc.	67, 68	
average cost per college and pupil	61	
discipline in	68, 69	
expenditure in	61	
fees in	61	
grants to	62	
higher work in		89
management of	60	
for women	215—216	83
method and subjects of instruction	64—66	
in native States, Bombay		88
progress and expansion	59—62	
seminar work in	65	
staff and remuneration	63, 64	
statistics	xiii, 59, 60, 61	83, 87—93, 223—229
students classified by race	60	
tutorial work in	64, 65	
Arts courses	50	66—73
Arya Samaj	38	
and female education	211	
institutions maintained by	274—276	91
Asiatic Society of Bengal	210	
Assistant inspectors, duties of		62—64
Association for the advancement of scientific and industrial education of Indians	176, 177	
Associations of teachers	201	
Atkinson, Lieutenant-Colonel E. H. de V., report by, on technical education	x, 175—17	
Attendance at training institutions	188	
Attorneys, qualifications of	146	
Auckland House School, Simla	244	
Average cost—		
per pupil	17, 61, 79, 81, 110, 139, 187, 190, 193—194	18, 19, 88—89, 91—93, 178, 181, 183, 191, 192, 228, 241, 251, 255, 274, 283
of a pupil in middle vernacular schools		255
of a secondary pupil	79	241
of secondary schools	79	241
Average number—		
of pupils in boys' primary schools		246
of pupils in middle vernacular schools		254
of towns and villages served by schools		244
Average pay of teachers	3, 122	
Average school life	140	161
Ayurvedic system of medicine	205	
B		
"B" classes	88, 89, 94, 155, 156, 157, 178, 186	
Bachelor of arts—		
degree	50—51	66—70
Europeans	60	
with honours	48	67—69
passes	42, 54, 60	
statistics		208
subjects for		82

	Vol. I. Pages.	Vol. II. Pages.
Bachelor of law (see also Law)	50	256
Bachelor of oriental learning (see also Oriental studies)	206	
Bachelor of Science (see also Science)—		
statistics		209
subjects for		82
Bachelorship of teaching	192	179
Backward classes	27	
education of	255—264	
special measures	261—263	
statistics	257—260, 263	
Bacteriological laboratory, Madras Veterinary College	171	
Bacteriological Laboratory at Muktesar	xi,	
Bacteriology, instruction in	xi, 153, 160	
Badagas (a tribe in the Nilgiris)	261	
Badshah Nawab Razvi Training College, Bankipore		191
Baids	204, 274	
Baigas	256	
Baluchistan, direction and inspection shared with North-West Frontier Province	29, 277	
Baly's (Archdeacon) committee	231	
Bangalore	277	
European college, proposed	xv, 235, 244	
Indian Institute of Science	ix, 26, 176, 177	
inspection		64
Baniadih school	181	
Bankipore, Arabic library at	210	
Baptist College, Rangoon		91
Baptist College, Serampur	4	
Baptist Mission Training School, Serampore		180
Baranagore Industrial Home	181	
Barbour, Sir David	31	
Baroda, free elementary education in	9, 131—132	
Barristers, status of	146	
Basel German Mission College, Calicut		87
Belgachia Veterinary College	59, 169, 171	
Bell and the pupil teacher system	3	
Benares—		
proposed Hindu University	xiii, 25, 43	
Sanskrit College	205, 210	
weaving school	183	
Bengal—		
area served by a school in	v, 106	245
Asiatic Society	210	
district committee of public instruction	40	
National College	179, 276	
National Council of Education	276	
oriental studies in	207	
privately managed schools in	vii, 80, 81	
residential schemes in	66, 67	
Technical Institute	179	
Bentinck, Lord, resolution by, (1835)	4	
Berar Victoria Memorial Technical Institute	179	
Berhampore College	4, 148	
Berry White Medical School, Dibrugarh		172
Bethune College, Calcutta	215	
Bettiah, Maharani of		191
Bhagwati Sahai, Rai Sahib, on education of labourers	138	
Bhandarkar, Sir Ram Krishna	204	
on oriental learning	209	
Bhavsingji, H. H. Sir	228	
Bhils	255, 257, 262, 2 6	
Bhopal, Her Highness the Begum of	226	
Bhownaggree, Sir M. M.	70	
Bhutias	258	
Bibliotheca Indica	210	
Bihar—		
School of Engineering, Patna	156	
weaving institute	183	
Bilgrami, Mr. M. H., on direct method of teaching	93	
Biology, impetus to the study of	41	
Bishop's College, Calcutta		89
Bishop's College Library	210	
Bishop Cotton Schools	231	
Blind school, Burma	266	
Board schools—		
administration of	37	
duration of school life in	109—110	
fees in	110	
pay of teachers	119, 122, 123	
popularity of	iv, 20, 115	
Boarding houses (see Hostels)		
Boarding house grants		116, 119
Board of Sanskrit examination	207	
Boards of studies	44	
Boiler Act, certificates	179, 180	
Bombay—		
College of Commerce	xii, 26	
conference on religious instruction	ii	
Medical College	6, 152	

	Vol. I. Pages.	Vol. II. Pages.
Bombay—*contd.*		
Medical Registration Act	xi	
moral text-books in	ii, 24	
school final examination	100	
tropical medicine course	xi, 152	
Bombay branch of the Royal Asiatic Society	210	
Bombay City, primary education in	118	
Bombay School of Art	x, 184	
Bombay University	41	
degree of commerce instituted	41	
Bourne, Sir A.	2	
on inspecting agency		62
and oriental studies	206—207	
on promotion in secondary schools	84	
and school leaving certificate	97	
on training school work		178
Brahmans, preponderance of, in colleges and schools	60, 77	
Braille system	265	
Brajamohan College, Barisal		92
British Baluchistan	277	
Buddhists, education of	261	
Building grants		107—124, 141—160
Buildings	ii	
colleges	62	87—93
law college	149	
primary schools	v, 21	
secondary schools	80	96—100, 102—104
type plans for primary schools	21	
Bureau, Central, in London	70	
Bureau of Education, publications	284	
Burma—		
deputy commissioner and education	36	
education of isolated communities	260, 261	
educational syndicate	39	
forest schools	168, 169	
local university	43, 55	
primary schools in (see also monastic schools)	v, 105—106	
Research Society	210	
school final in	100—101	
Burma Society in England	70	
Burmese	256	
Burn & Co., Messrs., workshop of	181	
Burrell, Mr. P. S., on school leaving scheme	99, 100	
Business departments in educational institutions	185, 186	
Butler, the Hon'ble Sir Harcourt—		
conference on education of domiciled community	234	
conference on orientalia	209	
on the Islamia College, Peshawar	25	
first member for education	19	
Boys' Orphanage, Lahore	236	
Byramjee Jeejeebhoy Medical Schools		171

C

"C" classes in high schools	88, 89, 94, 186	
Cadet Corps, Imperial	228	
Cadet grants	242	
Cain, Rev. J.	258	
Calcutta—		
art school	x, 183, 184, 185	
museum at	x	
primary education in	118	
proposed technological institute	173	
Calcutta Charity Schools	231	
Calcutta Hindu female training class		191
Calcutta *Madrassa*	3, 248, 251, 252	
Calcutta Medical College	xi, 152	
Calcutta School Society	3, 5	
Calcutta School Book Society	5, 282	
Calcutta Technical School	236	
Calcutta University	8, 41, 44	
address	i, 27	
law college	xii, 148	
tropical medicine	xi, 152—153	
Calcutta Vidyalaya	3	
Calcutta women's training college committee	19	
Cambridge local examinations	238, 241	
equivalent to matriculation	45	
Campbell Medical School, Calcutta		171
Canning College, Lucknow	63, 67	89
Canning's (Lord) minute	231	
Career—		
of pupils discharged from reformatory schools	268	
of State scholars	176	
Carpentery, peripatetic instructors in	183	
Carpet making	180	
Catalogue raisonnés	xvi, 210	
Catholic, Roman, Schools	233, 234, 242, 243	

	Vol. I. Pages.	Vol. II. Pages.
Cawnpore—		
Agricultural College	59, 161	
Technological Institute	ix, 177	
Census Commissioner for India, on literacy	141	
Central Board of madrassa examinations in Bengal	252	
Central Board of Examiners, Bengal madrassas	207	
Central Hindu College, Benares		90
Central Oriental Research Institute	209	
Central Provinces—		
libraries in	283	
need of medical training in	xii	
school final in	101	
demand for a university	43	
Central Research Institute, Kasauli	152	
Centralization deprecated	i	
Certificate in commerce	185, 186	
Certificate of mining	178	
Certificate, school leaving	viii, 45, 97—101	
Certificate, secondary school	25	
Cess Acts	10	
Cesses levied by local bodies	13	
Ceylon—		
analogy of, to India	132	
connection of educational institutions in, with those of India	53	
Chailley, M. Joseph	12	
Chairs of Indian History and Economics at Allahabad	56	
Chakmas (a tribe)	258	
Chancellors of universities	44, 47, 50	
Chandavarkar, Sir N.	260	
Character, formation of	i	
Charity Schools, Calcutta	231	
Charter of 1813	5, 10	
Chaupal (shed)	273	
Chenchus	258	
Chiefs and nobles, education of	227—230	
Chiefs' Colleges	xiii, 227—230	
administration of	227	
diploma of, equivalent to matriculation of Allahabad and the Punjab	45, 228, 229	
general	27	
post-diploma course in	xiii, 229	
syllabus in	228, 229	
Chinese school at Rangoon	276	
Chingal Varya Naicker's Technical Institute, Vepery	154	
Chingleput Reformatory School, Madras	267	
Chins	256	
Chittagong College	63	92
Chittagong Madrassa	251, 252	
Christ Church College, Cawnpore		90
Christian College, Allahabad		90
Christian College, Madras	4	
on school leaving scheme	98	
Chunar Reformatory, United Provinces	267	
Church Mission Society College, Tinnevelly		87
Church of England Schools	234	
Circles of inspectors	32	62—64
City and Guilds of London Institute examinations	178	
City College, Calcutta	63	
Civil Engineering College, Sibpur	178, 235	
Clare Road Convent Training class in Bombay	244	
Classes A, B and C, respective success of	89, 157, 186	
Classes—		
in colleges	65, 235	
in European schools	237	
in primary schools	113	
in secondary schools	71—73	97
size of	v	
Classical languages	203	
Classification of pupils by ages		55
Cochin, school leaving certificate in	98	
Code for European schools	237	
Co-education	219, 220	
Colleges (see also Arts colleges)—		
affiliation of	45—46	
agricultural	159—164	
classification of students by race	60	
of Commerce, Bombay	xii, 26	74
engineering and surveying	153—158	
European pupils in		279, 230
for Europeans	234, 235	
forest	166—169	
hostels, pupils in		225
law	147—150	
list of		212—222
medical	151—153	83
professional, and schools	145—172	
pupils in		224, 225
Sanskrit	204, 205	
seminar work in	65	

	Vol. I. Pages.	Vol. II. Pages.
Colleges—*contd.*		
increase in size and efficiency of	42	
Training, number of	191	
tutorial work in	65	
Veterinary	169	176
College of Engineering, Madras and Poona	154	
College of Science, Nagpur		92
Colliery Schools (see Mining schools or classes)	178	
Colvin Talukdars' School, Lucknow	229	
Coimbatore Agricultural College	161	
Coimbatore Forest College	166, 169	
Commerce, courses in		74
Commercial College, Bombay	xii, 26	74
Commercial education	xii, 185, 186	
continuation classes	186	
schools and classes	89, 185—186, 236	
Commercial lines in technical education	x	260
Commilla hostel	249	
Commission—		
of 1882	vi, viii, xvi, 8, 9, 73, 95, 105	
Royal, on decentralisation	74	
on public services	xiv	
on universities (1902)	viii, 8, 42, 95	
Committee(s) (see Text-book Committee)—		
advisory, in England	70	
Archdeacon Baly's	231	
on Calcutta technological institute	19	
curricula, Bengal	19	
district, of public instruction, Bengal	40	
European education, of 1910	237	
European schools, Madras	19	
consultative, on examinations	viii, ix, 241	
on factory labour	137	
on female education	19	
hill schools	231, 237	
industrial education in the Punjab	19, 174	
management of institution by	40	
on Muhammadan education	19, 253	
on oriental studies in Madras	207	
Pope's, on European education	231, 237	
for religious instruction	ii, 24	
rural education	165	
Sanskrit education	272	
for school hygiene	ii, iii	
school leaving certificate, Madras	19	
Sir Robert Laidlaw's	233	
on technical education	8, 173, 175	
for production of text-books	40, 279—281	
visiting	40	
women's training college, Calcutta	19	
Common rooms	iii	
Communal universities	23	
Compounders, classes for	150	172
Compulsory attendance	12	
Compulsory education	iv, 9, 18, 131—132, 136	
Compulsory vernaculars	203	
Concentration	20	
Conference(s)	19, 173	
at Allahabad	ii, vi, ix, 23, 111, 115, 134, 175	
in Burma	174	
held by department of education	i, 19	
of directors of public instruction	xvii	
on education of domiciled community	i, xv, 231, 234, 235, 242—244	
educational, of 1901	231, 237	
Government of India	19	
industrial education	19, 173, 174	
on Muhammadan education	253	
at Naini Tal	19, 73, 99, 173, 177	98
at Ootacamund	173	
of orientalists at Simla	xvi, 26, 204, 209	
provincial	19	
in the Punjab	19	
on religious instruction (in Bombay)	ii	
for training of teachers	200	
of village teachers (United Provinces)		183
Consultative committee on examinations in England	viii, ix, 241	
Continuation classes for commercial teaching	186	
Continuation schools	v, 138	
Control—		
of education	29	
of institutions by committees	40	
of secondary schools	74	
Coorg inspected from Madras	29	
Coronation Durbar	8, 27	

	Vol. I. Pages.	Vol. II. Pages.
Cost (see Expenditure)—		
of inspection	32, 33	17
of a primary school boy		251
per pupil	17, 61, 79, 81, 110 139, 187, 188, 190, 193—194	18, 19, 88, 89, 91, 92, 178, 181, 183, 185, 191, 192, 228, 241, 251, 274, 283
of school buildings	3	
of training	190	178, 179, 180, 186—187
Cotton, Bishop	231	
Cotton College, Gauhati	63	92
Council of education, 1842	5	
Countess of Dufferin's Fund	xii	
Courses (see Curriculum)—		
commercial		74
in European schools	237—241	
in lower classes	89—91	
madrassa	205, 253	
oriental studies	203	
primary	125—131	
school, experimental		129
in secondary schools	87, 88	
for training mistresses		192
tropical medicine	xi, 152, 153,	
of study in universities	45, 48, 50, 51	
Covernton, Mr. J. G.	2	
on collegiate life	68	
on Engineering School, Insein	158	
on increase of schools		101
on school curricula	90, 91	
on school final examination	100, 101	
on training courses		185
Craddock, Sir Reginald		103
Craft schools	175, 178—180, 182	
Creed or race—		
of girls	213, 216	
of primary pupils	109	
of secondary pupils	76	
of successful college examinees	53, 54, 60	
Croft, Sir Alfred	231	
Crosse, Mr. M., on direct method of teaching English	94	130, 131
Cumming, Mr. J. G., on pupils in industrial schools	181	
Curricula (see also Courses)—		
in Chiefs' Colleges	228, 229	
for European schools	237—241	
for hill tribes in Assam	258	
of *pongyi-kyaungs*		137, 138
of private institutions	271, 272, 274—276	
primary	125—131	
in rural and urban schools	iv, 125	
secondary, for girls	217	
in training colleges	192, 193, 196	
Curzon, Lord	i, 8, 24, 227, 231	
conference held by (1901)	8	
reforms under	i, 8	
Cuttack Medical School		171

D

Dacca—		
College	4	92
Madrassa	251, 252	
Medical School	xi	172
mess scheme and grant	67	
training college at	191	186
proposed university at	xiii, 25, 43, 55	
Dacca silverware and Bengal ivory carving	183	
Daflas	256	
Daly College, Indore	227	
David Hare Training College, Calcutta	191	179
David Sassoon Reformatory School, Bombay	267	
Dawson, Mr. T. S.	x, 175	
Dayal Singh College, Lahore		91
Dayanand Anglo-Vedic College, Lahore		91
engineering classes in	158	
teaching of medicine	205	
Dayaram Jethmal Sind College, Karachi	96, 155	
de la Fosse, the Hon'ble Mr. C. F.	2	
on female education	212	
on games	68	
on inspection of colleges	47	
on the Isabella Thoburn College, Lucknow	216	
on school life of girls	214	
on special inspectors	35	

	Vol. I. Pages.	Vol. II. Pages.
de la Fosse, the Hon'ble Mr. C. F.—*contd.*		
on teachers' remuneration	64	
on teachers under training	196	
on teaching in schools	93	
on text-books	280	—
on the Thomason Civil Engineering College, Roorkee	157	
on training		182
Deaf mutes, schools for	266	
Deb, Raja Radha Kanta	5	
Debating Societies	ii, 68	
Deccan College, Poona	63, 210	87
Decentralization	19	
Decentralization Commission	74	
on grants	13	
on local bodies and secondary education	9, 10, 74	
on transfer of secondary schools to Government	20	
Defectives, education of	265, 266	
Degrees	48, 50—51	
in agriculture	160, 163	74
B.O.L.	206	
in commerce	185	74
in engineering	154, 155	73
in law	149	72
M.O.L.	206	
in medicine	151—153	73
Dehra Dun—		
Forest School	xi, 166	
Research Institute	166	
X-ray Institute	xi, 153	
Delhi Durbar	8, 27	
Delhi Reformatory School	268	
Delhi Women's Medical College	xii, 26	
Deoband Arabic School	205	
Department of Education (Government of India) created	8, 29	
Departments—		
of industries	173, 174	
of public instruction	29	
Department of public instruction and universities	39	
Depressed castes—		
apathy towards	18	
education of	136, 137, 259, 260	
facilities afforded to	261, 262	
difficulty of providing teachers for	260	
Deputy inspectors	32, 34	62, 63
Deshi kasrat (indigenous physical exercises)	21, 130	
Despatch of 1814	5	
Despatch of 1854 on management of schools	9	
Despatch of 1859	8	
on local rates	10	
Devolution of powers	19	
Dharalas	260	
Diagrams—		
of classes in secondary schools	71	
of university courses		75—79
Dinajpur hostel	249	
Diocesan College, Calcutta	215	
Diploma—		
in agriculture	161—163	
in engineering	154	
in medicine	150	
in tropical medicine	xi, xii, 152—153	
Diploma examination in Chiefs' Colleges	45, 228	
Direct expenditure on education		205
Direct method of teaching English	93, 94, 193	130, 131
Direction	29	
Director General of Education, post abolished	29	
Directors of industries	174—175	
Director(s) of public instruction	xvii, 29	
conference of	xvii	
for North-West Frontier Province and Baluchistan	29	
Disaffiliation of colleges	46	
Discipline		127
in colleges	8	
in primary schools	113	
in privately managed schools	vii, 85	
in reformatory schools	268	
in secondary schools	83	
Dispensary at the Dacca College	67	
District Boards, administration of schools by	36, 37	
District committee of public instruction in Bengal	40	
District inspectors	34	
Doctor of law (see Law Colleges)	48	72
Doctor of medicine (see Medical Colleges)	48	73
Doctor of oriental learning		73
Doctorate of philosophy and science		72
Domestic economy	126, 219, 222, 236, 238—239	

	Vol. I. Pages.	Vol. II. Pages.
Domiciled community—		
conference on the education of	i, xv, 231, 234, 235, 242—244	
female teachers	vi, 243	
Doms	137	
Doveton, Captain, founded the Doveton College, Calcutta	4	
Doveton College, Calcutta	231	
Dowhill Girls' School, Kurseong	244	
Dravidian group	255—257	
Drawing books, production of	283	
Drawing examination in Bombay	185	
Drawing inspectors, appointment of	185	
Drill	127, 128, 200, 238, 239	
Drill master	190	
Dublin University Mission, Hazaribagh	183	
Duncan, Mr. J., and the Benares College	3	
Duff, Alexander		89
Dufferin Hostel, Dacca	249	
Dufferin's (Countess of) Fund	xii	
Duke of Edinburgh's fellowship, Bombay	52	
Duration of school life	140	
Durbar at Delhi	8, 27	
Duroiselle, Mr.	210	
E		
East Indian Railway	236	
colliery workshop	181	
Eastern Bengal and Assam—		
colleges in	63	91, 92
female education committee	19, 219, 222, 223	
privately managed schools in	vii, 85	
Ecole Française d'Extrême Orient, Hanoi	xvi, 209	
Economics, Minto Professor of, Calcutta	52	
Eden High School, Dacca		192
Eden Hindu hostel, Calcutta		88
Education Commission of 1882	vi, viii, xvi, 8, 9, 73, 95, 105	
on matriculation	135	
Education departments organised	19	
Education of the employed	135, 138	
Educational agencies	29—40	
Educational magazines	284	
Educational policy	i—xvii, 3—14	
Educational services	xiv, xv, 29—33	
Educational surveys	134, 135	
Educational syndicate, Burma	39	184—185
Edward College, Pabna		92
Edwards Church Mission College, Peshawar		93
Elementary education (see also Primary Education)—		
free and compulsory	iv, 9, 12, 18, 131—134, 136	
local boards' control	36	
slow growth of	5	
question of rural or agricultural bias	129	
courses	iv, 125—131	
training of teachers	198—199	177—188
Elliot and Baker hostels, Calcutta	248	
Elphinstone, Mountstuart	4	
Elphinstone College, Bombay	63	87
Elphinstone institution	4	
Elphinstone High School, Bombay		178
Embroidery, teaching of	180	
Employers of labour and industrial education	x, 175, 176	
Employment, chances of industrial	x, 175	
Empress Victoria readership, Allahabad	53	
Endowments—		
Palit's, Sir T., gift to the Calcutta University	18, 55, 56	
Science Institute, Bombay	18	
absence of, in secondary schools	84	
Tata family	18	
Engineering education	153—159	
causes of failure in Burma	158	
colleges, schools and statistics	154—158	83, 84, 258
degrees and courses	154—155	73
modification of courses	50—51	
England—		
Indians in England	69	
promotion from elementary to secondary schools compared with	103	
technological training in, facilities for	175	
English education, early demand for	4	
English teaching, special, for vernacular pupils	v, 72	
English universities—		
arrangements for admission of Indians to	70	
recognition of Indian universities	70	
Epigraphia Indica	210	

	Vol. I. Pages.	Vol. II. Pages.
Epigraphia Indo-Moslemica	210	
Equipment—		
in arts colleges		87—93
grants		107—124, 141—158
of primary schools	113	
of secondary schools		95—104
Ethnographic museum	x	
European pupils—		
in colleges		279—280
in Indian schools	232	
European schools—		
code for	237	
expenditure in		36—39, 282, 283
fees in	237	283
statistics		28, 276—283
pay of teachers	xv, 234	
Europeans, education of	xv, 27, 231—244	
college for, at Bangalore	xv, 234, 235	
concentration, need for	235	
courses and curriculum	237—241	
definition of Europeans	231	
early history of schools	231	
institutions and management	234	
institutions and pupils classified	235—238	
controversy about the study of Latin and a vernacular	239	
population of Europeans	232	
progress of	231—233	
recognition of schools	237	
statistics	232	28, 276—283
teachers and their training	243, 244	
Examinations—		
abolition of	i, 24, 25, 84	
Acharya	205	
in agriculture	160—163	
B.A., statistics		208
B.Sc., statistics		209
commercial	186	
by compartments	41, 49	
drawing, in Bombay	185	
in engineering	154, 155, 157	
for European schools	231, 237, 240, 241	
external, defects of	viii, ix, 96, 97, 101	
Fazil	207	
fees	49	211
in forestry	168	
government technical	180	
health, effect on	iii	
high school	240, 241	
higher degrees, statistics of	53	208—210
intermediate, statistics		208
law	146	256
law, results	149	256
law, statistics		256
law, subjects for		165—169
M.A., statistics		209
matriculation, statistics		86 208
in medicine	151—153	
Mulla	207	
oriental, statistics		229, 230
oriental titles	207	
Patamabyan	207	
peculiarity of, in Bombay		66
of pleaders	146, 149	
primary	113, 114	
in reformatory schools	267	
results	53, 54	44—47
results of, chiefs' colleges	228	
Sanskrit, board of	207	
school final and school leaving	viii, ix, 25, 95—101	96, 99
secondary	84	
secondary, consultative committee on	viii, ix, 241	
statistics		208—210
of teachers		180—182
title, for madrassas	207, 252, 253	
university, admission to	45, 48	
university, examinees and passes		84
university, subjects		81—82
in veterinary science, number passed	170	
Examinees, numbers and classes of	53, 54	
Examiners, university, appointment of	44, 49	
Excursions	iv, 184, 196, 268	
Expansion of primary education	iv, v, 134, 135	
Expenditure (see also "Cost")—		
in agricultural colleges	160—162	
in chiefs' colleges	227	
on college buildings	82	88—90, 92
on college scholarships	62	
on colleges	61	87—93
on commercial education	185	260

	Vol. I. Pages.	Vol. II. Pages.
Expenditure—*contd*		
on education (generally)	i, 16, 17	16—19, 205 206
on European education	232, 233	36—39
on female education	214, 215	273, 274
in Forest College, Dehra	168	
growth of	10, 11	
in law colleges and classes	147, 148	256
of local boards and municipalities		48—51
in medical colleges and schools	150—151	174
on middle vernacular schools		134—136, 138—146, 254—255
on primary education	110, 111	132—140
in reformatory schools	267	
on schools of art	183, 185	
in secondary schools	77—81	96—104
statistics, general		30—35
on technical and industrial schools	175	
in training institutions		178—180, 182, 183, 185—187
on universities	54	
in veterinary colleges		176
Experimental school courses		129
Experts, need of	xvi	
External examinations	viii, ix, 96, 97, 101, 241	
F		
Factory children, education of	137	
Faculties—		
oriental	204	
in universities	44, 48	71—74
Famines	17	
Fazil examinations	207	
Federal universities	xiii	
continuance of	42, 43	
residential arrangements		88—90, 93
Fees	61	
aboriginals and depressed classes exempted	261, 262	
enhancement of, in schools		95, 99, 103
in European schools	237	283
exemption from	iv, 12, 133	
in girls' schools	220	274, 275
lowering of	vii	
in middle vernacular schools		255
for Muhammadans, concessions in	248	
in primary schools	115, 116, 122, 123, 133	132—138, 252
rates of		105, 106
rates for teachers' children	123	
in secondary schools	77—79	95—104, 241, 242
in training institutions	188	
university examinations	49	
utilisation of	iv, 78, 116	211
Fellows, classes of, and their appointment	44, 47	
Fellowship—		
Mangaldas Nathoobhoy travelling	52	
Mohobat	52	
Fellowships for higher studies	52	
Female education (see also Girls)	vi, 211—225	
administration and inspection of girls' schools	224, 225	
colleges for girls	215	265, 267
Eastern Bengal and Assam committee	19, 219, 222, 223	
Hindus and	211	
institutions and pupils	vi, 215	265—273
measures for the popularisation of	220, 223	
primary schools and their curriculum	217—219	
private institutions for girls	219	
professional training confined to medicine and teaching	221	
progress	26, 212—215, 219	
public opinion and interest in	211, 212, 214	
scholarships	220	
secondary schools and their curriculum	216, 217	
Female education committee	19, 219. 222,223	
Female literacy	140, 141, 214	
Female teachers	vi, 223	191—193
Fergusson College, Poona		88
Finance, general	13, 14	
Financial policy	10	
Financial stress	17	
Findlay College, Mannargudi		87
Forest schools and classes	168—169	175
Forest services	166	

	Vol. I. Pages.	Vol. II. Pages.
Forestry, education in	xi, 166—169	
expenditure at Dehra	168	
Forests, extent and organisation of	166	
Forman Christian College, Lahore		91
medical examination of students at	67	
Free elementary education	iv, 12, 131—134	
Froebelian methods	126	
Fuller, Sir Bamfylde	182	
and Muhammadan education	253	
Fuller hostel, Rajshahi	249	
Furlough studies	xiv, 201, 284	
G		
Gait, the Hon'ble Mr. E. A.	2, 141	
Games	21, 22	
in colleges	68	
incipient professionalism in	22	
Gardens	iii, 112, 164	162
Garos	256	
General Assembly's institution of the Church of Scotland, Calcutta	4	
General Committee of Public Instruction, 1823	5	
Generosity, private, appeal for	xvii	
George the Fifth Professorship of Mental and Moral Science, Calcutta	52, 55	
Gifts to universities	18, 55, 56	
Girasias, education of	229	
Girdawars	129	164
Girgaum High School, Bombay	244	
Girls, education of (see also Female Education)	vi, 211—225	
fees in girls' schools	220	274, 275
general progress	26, 212—215, 219	
girls in boys' schools	219—220	23, 267
industrial education	221—222	
literacy among girls	140, 141, 214	
primary schools	217—219	
principles of	vi	
secondary schools	216, 217	
special colleges and arrangements for university examinations	215, 216	
Girls' schools—		
fees in	220	274, 275
statistics of institutions and pupils	vi, 215	265—272
Godley, the Hon'ble Mr. J. C.	2	
on advantages of Lahore for college life		91
on the Lahore School of Engineering	157	
on lower class courses	90	
on promotion	84	
on school buildings and teachers		101
on technical education in the Punjab	179	
on tutorial work	65	
Gokhale's, the Hon'ble Mr. G. K., Elementary Education Bill	9, 131, 132	
Gonds	256, 258, 262	
Gorakhpur Industrial School	181	
Governing bodies	40	
Governesses, visiting	221	
Government, transfer of secondary schools to	20	98, 100
Government College, Jubbulpore		92—93
Government College, Lahore		91
Government Commercial Institute, Calcutta	186	
Government schools	10	
primary, number infinitesimal	115	
secondary, number of	vii, 73	
Government service—		
qualifications for	vii	
teachers in, their number	32	54, 243
Government subsidies to primary schools	117, 118	
Government of India scholarships—		
for domiciled Europeans and Anglo-Indians	242	
for Indians	53	
for oriental studies	208	
for technical education, abroad	ix, 26, 176	
Graduates, statistics of	60	208—210
Grant Medical College, Bombay	152	
Grants—		
building		107—124, 141—160
for Calcutta and Dacca mess schemes	66, 67	
to colleges	55, 62	
imperial	8, 17	
imperial, for agency tracts	277	
imperial, for European education	233	
imperial, for hostels	24	
imperial, for hygiene	22	
imperial, for primary education	17, 111	
imperial, for secondary education	17	
imperial, for technical education	176	
increase of	20	
to *maktabs* and *madrassas*	251, 253	

	Vol. I. Pages.	Vol. II. Pages.
Grants—*contd.*		
to Muhammadan Anglo-Oriental Collegiate School		99
to night schools	242	
to aided primary schools for girls		274
to privately managed schools	20, 38	
salary	119, 120, 242	
staff		116
to universities	xiii, 41, 52, 55, 56	
Grant-in-aid—		
code revised in Bombay and Central Provinces		97, 103
elasticity required in rules	viii	
to European schools	xv, 242	
to girls' schools	220	
for oriental studies	xvi, 208	
to primary schools	105, 116, 119—120	141—166
to secondary schools	vii, viii, 84—87	107—124
system in the despatch of 1854	7	
Great Indian Peninsula Railway, school for apprentices	236	
Griffith, Mr., gift of, to the Madras University	56	
Griffith, Mr. W. E., on the direct method	193	
Grounds, recreation	iii	
Gulab Singh & Sons, Messrs.	282	
Gujarat College, Ahmedabad	18, 20	88
Gurdaspur, medical inspection at	35	
Gurukul at Hardwar	274	
Gurus, number employed	200	
Guru-training schools	188	180, 181
for *Mundas* and *Oraons*	263	
number and pupils	198, 199	
Gymnasia	iii	
H		
Half-timers	112, 136, 137	
Hanoi, Ecole d'Extrême Orient at	209	
Hardinge Professorship of higher mathematics	52, 55	
Hardinge's, Her Excellency Lady, scheme for training nurses	xii, 224	
Hare, David	3	
Hare School, Calcutta		88
Harris High School	251	
Hastings, Marquess of, President of Calcutta School Society	5	
Hastings, Warren	3, 205, 252	
Hazaribagh Reformatory School	267	
Headmasters, pay of	31	
Health, effect of examinations on	iii	
Hemanta Kumari Devi College	205	
Hewett, Kshattriya School, Benares		99
Hewett Weaving School, Barabanki	183	
High school examination	240	
High schools—		
Government, in Burma	20	
recognition of	xiii, 45	
transfer of, to Government in the United Provinces	20	93
Higher studies—		
fellowships	52	
professorships	52	
at universities	xiii, 41, 42, 45, 51, 52, 55, 56	
Hill languages, reduction of, into script	263	
Hill schools committee	231	
Hill tribes (see also Aboriginals)	257	
education of	258, 259	
teaching of weaving to	262	
Hindu College, Delhi		91
Hindu female training class, Calcutta		191
Hindu University at Benares, proposed	xiii, 25, 43	
Hindu widows' home		193
Hindus and female education	211	
Hire purchase system for weavers	183	
Hislop College, Nagpur		93
Historical Society, Punjab	210	
History, Indian	xvi, 52, 55, 56	
Holidays	32, 112	
Home teaching for girls	220	
Honorary degrees	47, 50	
Honours (degree)	48—49	
award of, Bombay and Calcutta		66, 67
in B.A. and B.Sc.		72
Madras B.A.		68
Punjab B.A.		69
Hooghly College	4	
Hooghly Madrassa	252	
Horovitz, Dr. J.	250	
Horticulture, training in	165	
Hos	256	
Hostels	ii	
for aboriginals	258, 259, 262	

	Vol. I. Pages.	Vol. II. Pages.
Hostels—*contd.*		
in chiefs' colleges	228	
collegiate	66	88—93
collegiate, statistics		225
denominational		
imperial grants for	24	
law college	56, 150	
provision of, for middle vernacular schools in the United Provinces		136
for Muhammadans	248, 249, 254	
for Oriental College, Lahore	56	
for secondary schools	84	97, 99, 100, 103
statistics		52, 53
system	24	
Howell (quoted)	5, 10	
Hundis (bills of exchange)		163
Hyderabad	277	
school leaving certificate in	93	
Hygiene	ii	
Bachelor of	50	
for European schools	xv	
for girls	vi, 219	
imperial grant for	22	
lessons in	22	
in primary schools	125, 126, 127, 129	
school	iii	
in the training course for mistresses		192
Ibbetson Scholarship	162	
Imamul Madaris	205, 271	
Imperial assignments	14	
Imperial Cadet Corps	228	
Imperial grants (see Grants).		
Imperial Library, Calcutta	283	
Imprisonment of juvenile offenders	267	
Indian art	184—185	
Indian Educational Service—		
recruited in England	30	
pay and emoluments	30	
Indian History, chairs of, at Allahabad and Calcutta	52, 55, 56	
Indian Institute of Science, Bangalore	ix, 26, 176, 177	
Indian Museum	x	
educational value of	283	
Indian systems of medicine	205	
Indian Thought	210	
Indigenous education (see Oriental Studies)—		
grants-in-aid for	120, 208	
systems of instruction	xvi	
scholarships	208	
schools	3, 271—274	
Indirect expenditure on education		206
Indore Medical School		173
Industrial education (see also Technical Education)	ix, 173—186	
in Bombay, unsatisfactory state of	180	
of backward classes	259, 260, 262	
conferences on	19, 173—174	
and employers of labour	x, 175.	
of Europeans	235—236	
of girls	221, 222	
institutions, classification of	175, 176	
supervision of	174	
Industrial schools		259
at Amraoti	179	
expenditure, management, etc.	175, 180—182	
inspectors for	32	
number of	175	
policy regarding	ix, x	
Industrial surveys	173	
Industrial training, demand for	21	
Insein School of Engineering, Burma	158	
Inspecting agency	32—36	62—65
for aboriginals	258, 263	
cost of	32—33	
details of	36	65
for girls' schools	32, 224—225	
increase in	ix, 19, 33	
and local boards	10, 33	
for Muhammadan schools	32, 254	
number and classes of officers	32, 35, 254	65
reform of	33	
training of	201	
Inspecting arrangements in the quinquennium	33—35	62—64
Inspecting *maulvis*	254	
Inspecting *pandits*	32	

	Vol. I. Pages.	Vol. II. Pages.
Inspection—		
of Bangalore schools		64
of chiefs' colleges	229	
of colleges by universities	45, 46	
of Coorg schools from Madras	29	
of European schools	237, 244	
of indigenous schools	208	
medical, of boys	35	
method of	viii, 34	
of Muhammadan schools	32, 254	
subordinate civil officers and	36	
Inspector General of Agriculture, post abolished	158	
Inspectors	32—35	
circles of	33, 34	62—64
proposed appointment of district	34	
of drawing, Bombay	185	
duties and powers of	34	
grades and kinds of	32	
for Muhammadan schools	32, 254	
of oriental schools	xvi, 208	
their part in school final examination	ix	
for special subjects	34—35	
of weaving and technical schools	174	
Inspectresses for girls' schools	32, 224, 225	
Institutions—		
classified		
number of, by provinces and periods	14	197
Instruction—		
stages of		40—43
visual	284	
Instructors—		
in manual training	131	
peripatetic, weaving and carpentry	183	
Interchange of ideas	xvii	
Intermediate examination—		
statistics	60	208
subjects for		81
Isabella Thoburn College, Lucknow	69, 216	192
Isabella Thoburn Normal School, Lucknow	224	192
Islamia College, Lahore	250	91
Islamia College, Peshawar	25, 250	93
Islamia School, Amroha	205, 271	
Isolated communities	260, 261	
Itinerant teachers for women	221	
J		
Jackson, Mr.	83	
Jagad Vritta (a newspaper)	83	
Jagannath College, Dacca		92
Jagatpur Asram, Chittagong	208, 219	
Jaintis	258	
Jammu Sanskrit Library	210	
Japan compared with India	102, 182	
Jatapus	258	
Jaunpur, a seat of oriental learning	3	
Jews, scholarships to	242	
Jubbulpore Arts College, engineering classes abolished in	158	
Jubbulpore Reformatory School	268	
Jubbulpore Training College	191	
Jurisdiction, extent of inspectors'	33, 34	
Jurisdiction of universities	53	
Juvenile offenders (see Reformatory Schools)	267—269	
K		
Kabindra College at Goila, Bakarganj	208	
Kacharis	256	
Kachins	256	
Kaithi	273	
Kalimpong	236	
industrial schools for girls	222	
St. Andrew's Colonial Homes	236	
Woodburn Cottage Homes	236	
Kaliparaj	257, 262	
Kamdars (agents), training of	165	
Kandhs	258	
Kanikar	256	
Karen schools, grants for		118
Karens	182, 256, 261	
Kareya Blind School, Calcutta	265	
Kasauli, Central Research Institute at	xi, 153	

	Vol. I. Pages.	Vol. II. Pages.
Kashi Kishore School, Mymensingh	183	
Katkaris	257, 262	
Kaurapukur Industrial School	181	
Kavyatirtha	207	
Kayauk-taw-gyi Pagoda, Mandalay	207	
Keys, use of	91, 93	
Khairabad, a seat of Arabic learning	3	
Khalsa College, Amritsar		91
Khalsa, dewan chief, as educational society	38	
Khamtis	258	
Khasis	256—258, 262	
industrial training of	182	
Khonds	256	
Kindergarten	238	190
King Edward VII memorial scheme	153	
King-Emperor's reply to the address of the Calcutta University	i, 27	
King George's Medical College, Lucknow	26, 153	90
Kintals (low class Eurasians)	232	
Kolarian tribes	256	
Kolis	255, 257, 263	
Kondoras	258	
Koran, the	204	
Koran schools	3, 204, 246, 251, 273	290, 291
for girls	219	
Korkus	255	
Koyas	258	
Krishnagar College founded	4	
Kukis	256, 258	
Kumars in chiefs' colleges	228	
Kurseong Forest School	166	
Kurumba	256	
L		
Laboratories—		
bacteriological, at Muktesar	xi	
in provincial colleges	65	
Sir George Clarke technical	184	
Labour, employers of, and industrial education	x, 175, 176	
Labourers, education of	136, 138	
Lace making	180, 222, 240	
Ladies, medical education of	xii, 221	
Lahore Cathedral Orphanage	236	
Lahore Medical School	xii, 153	172
Lahore School of Engineering	157	
Lahore Training College	191	183
Laidlaw, Sir Robert	xv, 233	
Lalit Hari Pathshala, Pilibhit	205	
Lambadis	258	
Lancaster	3	
Languages—		
aboriginal, difficulty of acquiring and extinction of	257	
classical	203	
books in hill	263	
learnt by pupils, statistics		204
Lantern lectures	284	
Larkana *Madrassa*	252	
Latin, controversy about the study of	239	
Law	145—150	
degrees and courses	xii, 50, 149	72
examinations	146	
examination subjects	149	165—169
expenditure	147, 148	256
Tagore Professor of, Calcutta	52	
Law College, Calcutta	xii, 148	
Law colleges—		
buildings and libraries	149	
concentration	147	
examination statistics		256
hostels	150	
full time principals	148	
statistics of	xii, 147—148	256
managed by universities	51	
Lawley, Sir Arthur	161	
Lawrence Asylum, Ootacamund	236	
Lawrence military schools	231, 236	
Leaving certificates	viii, ix, 25, 88, 95—101, 240, 241	95, 98
Lecturerships—		
for higher studies	52	
on oriental subjects	204	
Wilson	52	
Legal education (see also Law and Law Colleges)	145—105	
courses	xii, 50, 149	72
reform of	146, 147	

	Vol. I. Pages.	Vol. II. Pages.
Legal practitioners, qualifications of	145	
Legislation, lack of	8	
Lepchas	258	
Lesson, object (see Object lessons).		
Libraries	283	
agricultural college	164	
in the Central Provinces	283	
collegiate		90
law college	149	
of oriental collections	210	
of secondary schools		97, 102, 103
improvement of university	xiii, 56—57	
village	283	
Licensing out of boys under sentence	268	
Licentiate—		
of medicine and surgery	151	
of teaching		179
Literacy—		
among aboriginals	257—259, 263	
education and	142	
among girls	140, 141, 214	
progress of	139—143	
retarding causes	139	
in rural and urban areas	118, 142	
Local boards—		
and elementary education	36, 37	
and municipal expenditure	10—11, 110, 117—119	48—51
powers of	29, 36, 116	
teachers under	32, 116	
value of	37	
Local Boards Act	116—117	
Local bodies—		
functions of	36—37, 116—117	
transfer from, of high schools to Government	20	
Local universities	xiii, 42, 43	
Lolo	256	
London matriculation, equivalent to matriculation of Calcutta	45	
London Missionary Society, Calcutta	4, 181	
training college, Bhowanipur, maintained by	191	179
Loreto House, Calcutta	215, 236	
Low castes, education of (see depressed castes)	136, 259—260	
Lower primary schools, course in (see Courses)	iv	
Lucknow—		
industrial school	181	
medical college	26, 153	
school of arts and crafts	181, 185	
training college for under-graduates	191	181
Lushais	256, 258	
Lyallpur Agricultural College	162	
Lytton, Lord	231	

M

Macaulay's minute	4, 203	
Madhavlal Science Institute, Ahmedabad	66	
Madras—		
Government Press technical school	180	
recognition of schools in	9, 39	
school leaving certificates	viii, ix, 88, 97, 98, 102	
special officer in	xvii	
improvement in teachers' pay	31, 80	
Madras School of Industry and Design	6	
Madras University	41	
Madrassa, Calcutta, founded by Warren Hastings	3, 203, 205, 252	
Madrassa(s)	xvi, 3, 196, 205, 246, 248, 249, 251—254, 272	
at Amroha	205	
at Calcutta	3, 203, 205, 248, 251, 252	
Central Board of Examiners	207	
Chittagong	205' 251, 252	
at Dacca	205 251, 252	
at Deoband	205,	
grants to	xvi, 206, 209, 253	
at Hooghly	205	
in Sind	205	
Madrassa-i-Azam, Madras	251	
Madrassa-i-Tibbiya, Delhi	205	
Madura Technical Institute	154, 180	
Magadhi	272	
Magazines, educational	284	
Maghs	258	
Magic lanterns	284	

	Vol. I. Pages.	Vol. II. Pages.
Magistrates, position of, in relation to education	36	
Mahabharat, ethical value of	ii	
Mahajan Home Industrial School, Surat	180	
Mahajani characters		163
Mahajani schools	274, 275	
Mahakali *pathshalas*	219, 274	
Maharana of Rajpipla	132	
Mahamahopadhya, title of	207	
Mahbub College	277	
Mahila Silpa Asram, Calcutta	222	
Maintenance grants		107—124, 141—160
Maisadal Technical School, Midnapur	156	
Maktabs	xvi, 3, 125, 204, 246, 251, 252, 253, 254, 271—273	
aid to	iv, xvi, 208—209	
Malarial technique	xi, 153	
Malguzari class (revenue) at Nagpur	165	
Management	13	
of arts colleges	60	87—93
of board schools	36, 116	
of chiefs' colleges	227	
of European institutions	234	
of girls' institutions	215—219	
of Government schools	9, 10	
of industrial schools	174	
of law colleges	147—148	
of primary schools	105, 108, 114—119	
of reformatory schools	267	
of secondary schools	73—75	
Managing committees	40	
Mangaldas Nathoobhoy travelling fellowship, Bombay	52	
Manipuris	258	
Manmatha College, Tangail		92
Manual training	vii, xiv, 22, 91, 126, 127, 129, 130, 193	192
instructors in	22	
Manufacturers, attitude of, towards state scholars	175	
Manuscripts—		
collection of	210	
Government grant for	210	
oriental	xvi, 210	
Map, village teaching of	iv, 12, 125, 130	
Marrs, Mr. F. W., on anglo-vernacular schools		125—129
Marshall, Dr. J. H.	x	
Martin, General Claude	4	
Martinières	4, 231	
Master of Arts examinations—		
abolition of, in Madras		68, 72
courses for		66—72
successful European candidates	60	
rules for private candidates (Calcutta)		66
statistics		209
Master of Law		72
Master of oriental learning	206	73
Matriculation examination	viii, 45	
age of	81	
candidates and passes	49, 54, 102, 103	85, 86, 208
courses	87, 88	
defects of	96, 97	
equivalents of	45	
and European schools	241	
and female candidates	216	
London	45	
scheme and subjects for		94
held by universities	45	
Maulana Rumi, ethical value of	ii	
Maulvis	xvi	
inspecting	254	
training of	196	
Mayo College, Ajmer	xiii, 227, 229, 277	
Mayo School of Arts, Lahore	174, 185	
Meches	256	
Medal, Sir James Wilson	162	
Medical—		
degrees		73
education	xi, xii, 150—153	170—173
examination of students	21, 22, 35, 67	128
officer, at Gurdaspur	35	
schools		170—173
Medical College(s)	xi, xii, 150—153	
Bombay	6, 152	
Calcutta	xi, 6, 152	
Expenditure in	151	174
Lahore	153	

	Vol. I. Pages.	Vol. II. Pages.
Medical College(s)—*contd.*		
Lucknow	26, 153	
Madras	59, 151, 152	
statistics		257
for women at Delhi	26, 221	
Medical Registration Act	xi	
Medical School, Cuttack		171
Medical students, classes of	150	
Medicine—		
indigenous system	205	
modification of courses	50	
Meerut College	186	89, 90
Meikle, Mr. H. G. W.	2	
Mercara Training School, Coorg		187
Method of teaching—		
direct	93, 94, 193	130, 131
in a normal school		189, 190
'phonic' and 'look and say'		131
in primary schools	112, 113	
in secondary schools	91—95	
in vernacular training schools	199—200	
Method of training—		
in colleges	193	
in schools	195	
Methods, Froebelian	126	
Metropolitan Institution, Calcutta	63	88
Mianji schools (Muhammadan teachers)	254	181
Middle English schools, statistics of	75	232
Middle *madrassas*	251, 253	
Middle vernacular schools	v, 138—139	
average cost of a pupil	139	
definition of	138	
expenditure	139	254
fees in		134, 135, 136, 140, 255
number of	138, 139	134—136, 138, 140
relation of, to primary schools	105, 113	
average number of pupils		254
statistics of		253—255
optional teaching of English		138
unpopularity of, in Bengal and the Punjab		134, 136
Midwives, training of	221	
Millard School, Bombay	265	
Mining schools and classes	178	
Minto Hostel, Patna		89
Minto Professor of Economics, Calcutta	52	
Minute—		
Lord Canning's	231	
Lord Macaulay's	4, 203	
Miris	256	
Mirs of Sind, education of descendants of	229	
Mishmis	256	
Missen Widows' Industrial Home, Baranagore	222	
Missionaries	37, 38, 82	
and education of backward classes	258—260, 262, 263	
and collegiate education		87—93
and commercial education	186	
and education of defectives	265—266	
and European education	234—236	
and female education	215, 216, 218, 221, 222, 224	
and industrial education	180—183, 222	
and private institutions	273	
and training of mistresses		191, 193
Missionary education	vii, 37	191—193
Mistresses (see "Women teachers")	223, 224	
Mittra, Raja Rajendra Lall	204	
Mixed classes (see "Co-education")	219—221	
Model schools	188, 189	
Modern sides, commended (see also "School final examination")	vii, viii	
Mohabat fellowship	52	
Mohan Lal, Rai Sahib	162	
Mohsin fund	4, 205, 248	
Monastic schools	v, 130, 133, 273	137
girls excluded	141, 274	
Mongoloid group	256—259	
Monitorial system	ii, 267	
Monograph—		
on anglo-vernacular schools in Bombay		125—129
on the direct method	94	130, 131
on normal school teaching	200	189, 190
on rural school teaching	125	162—164
Montagu, the Hon'ble Mr. E. S., and the Hon'ble Mr. Gokhale	132	
Moon, Dr.	265	
Moral teaching	ii, 22—24	
Moral text-books in Bombay	ii, 24	
Morris College, provincialisation of	20	
Moslem University at Aligarh, proposed	xiii, 25, 43, 250	

	Vol. I. Pages.	Vol. II. Pages.
Motamids and *musahibs* in chiefs' colleges	228	
Muhammadan Anglo-Oriental College, Aligarh	250	89, 90
Muhammadan Anglo-Oriental Collegiate School, grants to		99
Muhammadan population	245	234
Muhammadan University at Aligarh, proposed	xiii, 25, 43, 250	
Muhammadans—		
employment of, in educational posts	254	
and female education	211, 213, 221	
at schools	xv, 245—246	284—288
under training	188	
Muhammadan education	245—254	
committee in Bengal	19, 253	
attitude of the community	245	
fee concessions	248	
general	xv, 27	
linguistic difficulty	249, 250	
progress of	245—247	
schemes of	251, 253, 254	
special facilities for	248—250	
special inspectors	xv, 254	
special institutions for	250—253	
statistics	245—247	284—288
Urdu as vernacular	249—252	
Muir Central College, Allahabad	63	90
Mukharji, the Hon'ble Sir Ashutosh, on law students	147	
Mukhtars (see Law)	145, 146, 149	
examination of		72—73
Muktesar, laboratory at	xi	
Mulla examinations	207	
Mulla schools	105, 251, 273	
Munda	256, 258, 262	
Municipal expenditure	118, 119	48—51
Municipalities—		
colleges maintained by	60	
and education	10, 13	
high schools transferred to Government	20	
lack of interest in primary education	18	
schools maintained by	36, 118	
Murarichand College, Sylhet		92
Murray College		91
Museums	x, xvi	
at Calcutta	x	
educational use of	x	
ethnographic	x	
Music, schools of	185	
Mysore, grant to Indian Institute of Science	ix, 177	
school leaving certificate in	98	

N

Nadia	3	
Sanskrit college	205	
Nadwa school	205	
Nagas	256, 258, 262	
industrial training of	182, 262	
Nagpur—		
agricultural college at	162	
university proposed at	xiii, 43	
Naini Tal conference	19, 73, 99, 173, 177	
Narsinga Rau's, Mrs. A. V., College, Vizagapatam		87
Nathan, Mr. R.	4, 37, 116, 146	
National association for female medical aid	xii	
National College, Bengal	179, 276	
National Council of Education	276	
National schools	276	
Native States	277	
area and population		197
colleges	60	
for which statistics are given		197
Nature study	iv, 125, 128—130, 165, 200, 201	
in normal schools	165	
Naushahro *Madrassa*	252	
Nawadwip, Sanskrit college at	205, 208, 272	
Neutrality, religious	ii, 7, 22, 23	
Newington School, Madras	229	
Nicobar islands	277	
Night schools	137—138	
for apprentices	236	
grants to	242	
in Lucknow industrial school	181	
Nizamat, education of	229	
Noble College, Masulipatam		87
Nonconformist schools	234, 235	
Normal school(s)	iv, 197—198	182—185, 187, 188

	Vol. I. Pages.	Vol. II. Pages.
Normal school(s)—*contd.*		
teachers in	194, 197—198	
Lala Tara Chand on teaching in	200	189—190
training in	198	
work in		189—190
Northbrook Society	70	
North-West Frontier Province—		
department of education organised and inspecting staff, strengthened	19	
post of director created	29	
free primary education in	133	
improvement in teachers' pay	32	
Numbers at school	15	
Nurses, Her Excellency Lady Hardinge's schemes for training	xii, 221	
Nurul-Madaris	205, 271	
Nayaratna, Mahesh Chandra	207	
O		
Oakgrove School, Mussoorie	236	
Object lessons	90, 125, 126, 128—130, 219, 238, 239	
teaching of, in rural schools		162—164
Occasional Report series	284	
Offenders, youthful	267	
Officers, recruitment of educational	30	
Oral teaching of English	90, 127	130, 131
Oral test	99—101, 113	
Orange, Mr. H. W.	149, 231, 235, 265	
on wastage of pupils	102	
Oraon, books in	281	
Oraons	257, 258, 262	
Oriental College, Lahore	48, 51, 56, 205, 206	91
Oriental colleges	204	
Oriental conference	xvi, 26, 204, 209	
Oriental examinations, statistics of		229—230
Oriental faculties	204	
Oriental institute for India, proposed	xvi, 209	
Oriental institute, Vladivostock	xvi, 209	
Oriental language and studies	203—210	
Oriental learning—		
bachelor of	206	
at Madras	204	
master of	206	
scholarships for	208	
Oriental libraries	210	
Oriental publications	210	
Oriental research institute	xvi, 209	
Oriental schools	xvi, 208	
inspection of	208	
Oriental studies (see Indigenous education)	203—210	
committee in Madras	207	
conference in Simla	xvi, 26, 204, 209	
degrees and courses	206	73
examinations and titles	207	
reviving interest in	xvi, 203, 209	
system, defects of present	206	
system, new and old contrasted	204	
system, old	206	
at the universities	204, 206	
Oriental subjects, higher courses in	203—204	
Orientalia	xvi, 203	
conference on	xvi, 26, 204, 209	
Orphanages	236	
teaching of industries in	182	
Oxford and Cambridge hostels, Allahabad		90
Oxford Mission	181	
Oxford senior local examination, and matriculation	45	
Oudh and Rohilkhand Railway schools for apprentices	236	
Overcrowding in schools	39	99, 134
P		
Paharias	258	
Painting, Indian, revival of	x, 184—185	
Palamcottah schools for defectives	265	
Palit's, Sir T., gift to the Calcutta University	55, 56	
Pandits	xvi	
inspecting	32	
Panos	258	
Patambyan examination	207—208	

	Vol, I. Pages.	Vol. II. Pages.
Pathological institute	xii, 151	
Pathshalas	3, 272	
aid to	iv, xvi	
Patna, training college at	191	179
proposed university at	xiii, 43, 55	
Patwaris (village accountants)	273	163, 164
Pay—		
of headmasters	31, 82	
of primary teachers	iv, v, 32, 119, 121—124	
of services	xiv, 30, 31	
of teachers, average	3	
of teachers, improvement in	31, 32, 80	
of teachers in secondary schools	vii, 80—82	243
of staff of training institutions	189—190	
of trained teachers	82—83	
of vernacular trained teachers	122	179
Payment in kind of primary teachers	122	
Peasant girls school in Bengal	218	
Pensions	xiv, 21, 32, 124	
Percentage of pupils to population of school-going age	15, 139	205
Percival's, Mr. H. M., gift of books to the Punjab University	57	
Peshawar—		
Arts College at	18	
normal school at	197	188
Philippines, analogy of the, to India	132	
Physical condition of pupils		126
Physical education		128
culture	ii, 21, 22	
exercise	113, 125, 127, 128, 130	
health neglected	vii	
Physical training	21—22	
in chiefs' colleges	228	
deshi kasrat	21, 130	
compulsory games	21	
incipient professionalism in games	22	
Pial schools	274	
Pilibhit, Sanskrit School at	205	
Pithoro Madrassa in Sind	252	
Pittapur Raja's College, Cocanada		87
Plague	17	
Plans for school buildings	21, 198	
Plantations, education of those employed in	137	
Playgrounds	21, 81	
lack of	vii, 22, 217	126
Pleadership examination	146, 149	
Policy—		
financial	10—11	
of Government	7, 73	
regarding industrial schools	ix, 173	
Politics and college students	68—69	
Pongyi kyaungs (monastic schools)	xvi, 3, 125, 250, 273	
curriculum of		137
Poona Agricultural College	160	
Poona College	3	
Poor students, concessions to	133, 248	
Pope's, Mr. J. V. S., committee on European education	231, 237	
Population	1	
aboriginals	255—256	
and area	1, 139	15
European	232	
Muhammadan	245	284
under review	1	
of school-going age	15, 139	205
Post-diploma course in chiefs' colleges	xiii, 229	
Post graduate courses in agriculture	159—160	
Post graduate teaching in Calcutta	52	
Postal work and teachers	123	
Pottery, school of	184, 185	
Practical instruction	iii	
for girls	vi, 219	
Practical test	65, 99, 100, 101	
Practising schools	xiv, 188—189	
for elementary teachers	iv, 189	
for secondary teachers	xiv, 188, 193	178, 181, 187
Prantij school for defectives	265	
Premchand Roychand—		
gift to Bombay University	56	
scholarships	52	
Presents received by teachers	38, 122	
Presidency College, Calcutta—		
absorbs the Calcutta Vidyalaya	4	
cost	61	
staff of	64	
Presidency College, Madras, founded	4	
Presidency training school, Madras	244	
for mistresses (Madras)		191

	Vol. I. Pages.	Vol. II. Pages.
President of Magdalen College on universities	43	
Primary education	105—143	
area served by a school	106	133
claims of	iv	
reform of curriculum in the two Bengals	126—128	138
definition	105	
discipline	113	
provision of equipment	113	
expenditure on	110—111	
extension of	iv, v, 134	
leaving certificates	113—114	
liberal exemption from fees in the Punjab		136
free and compulsory	iv, 9, 12, 18, 131—134, 136	
free in the North-West Frontier Province, in rural parts of the Punjab, in monastic schools, Burma	133	140
general	26	
number of Government schools	115	
imperial grants	111	
management	105—106, 114—119	
organisation	105	
principles of	iv	
progress of, statistical	106—111, 139	
in provinces		132—140
public interest roused	111	
pupils, number of	v, 107, 139	
pupils classified by race	109	
provision of school gardens and playgrounds		132, 134, 139
provision of school houses		132—136, 138—140
need of survey	111	
teachers	112, 121—124, 198—199	
Primary school(s)—		
area served by a	106	
boards and committees, powers of	116—117	
and Bombay corporation	118	
buildings	112	
capitation grant	119, 122	
cost of a	v, 110	
average enrolment	107	
examinations	113—114	
expansion of	v, 134—135	
expenditure in	110	248—251
fees in	115, 116, 122, 123, 133—134	252
financial arrangements	117, 118	
assessment of grants	119—120	
holidays	112	
average cost of a pupil		251
average number of pupils in		246
distribution of pupils by race or creed	109	
scholarships in	114	252
duration of school life	109, 140	
statistics of		244—252
subjects and method of instruction	113, 125—131	
Prince of Wales' Medical School, Tanjore		170
Printing and book-binding taught	180—182, 267	
Prior, Mr. R. D.	2	
on dicipline	83	
on Engineering College, Poona	154, 155	
on results of inspection of Bombay colleges	46	
on law lecturers	147	
on primary education of girls	217	
on school final examination	100	
on secondary education of girls	216, 217	
Private agency	vii, 20	
education by	37	
Private candidates, rules for admission to M.A. examination (Calcutta University)		66
Private enterprise—		
in European schools	xv, 233	
in secondary schools for Indians	vi, vii, 73—74	
Private funds defined	13	
Private institutions	271—276	
advanced	271	
anglo-vernacular schools	275	
classification of	271—273	
with distinctive curricula	274	
definition of	13, 271	
elementary	272—274	
for girls	219	
national schools	276	
statistics	271—273	289—292
trade schools	274—275	
Private management	vii	
discussed at Allahabad conference	20	
defective	20	
in the despatch of 1854	7	

	Vol. I. Pages.	Vol. II. Pages.
Private medical schools	xi	
Privately managed colleges—		
expenditure and income	61, 62	
statistics	60	
Privately managed schools	vii, 20, 38	
definition of	13	
encouragement of	9	
finances of	38	
grants to	20, 33, 39	
improvement of	20, 21	
primary, condition of	116, 118	
secondary, general description of	85	
improvement of staff	21	
statistics of	38	
teachers in	32	
value of	39	
Professional colleges and schools	145—172	
scope	145	
Professional education, general	26	
Professionalism in games	22	
Professorships for higher studies	52, 55—56	
Promotion in school	84	127
Proportion of pupils to male school population	76	
Proprietary schools	38	
Prothero, Mr. M.	2	
on guardians	24, 66	
on *gurus*	200	
on inspecting agency		62
on matriculation	94, 97	
on mission agencies	38	
on aided primary schools for girls	218	
on secondary schools		98
on tutorial work	65	
Provident fund for teachers	xv, 21, 32, 124	
Provincial Educational Service	29—	
Provincial Forest Schools	169	
Provincial Forest Service	166	
Provincialisation—		
of colleges	20	
of high schools	20	
of schools in Eastern Bengal and Assam and the United Provinces	73	
of schools, proposed, in the North-West Frontier Province	80	
Provision for old age	xv, 21, 32, 124	
Public funds, definition of	110	
Public institutions—		
definition of	13	
statistics of		198—199
Publications	284	
university	56	
Pulayars	258	
Punishment in indigenous schools	3	
Punjab—		
colleges in	63	
Historical Society	210	
law college	149	
improvement in pay of teachers	80	
text-book committee	279, 280, 282	
Religious book society	282	
Punjab University	8, 41	
Punjab Veterinary College	170, 171	
Pupil teachers	3, 7	
Pupil(s)—		
classification of, by ages		55
in colleges		224—226
in college hostels		225
number of		200—204
in primary schools, distributed by race or creed	109	
at school	15, 16	
in all schools, since 1878		200
in secondary schools by race or creed	76	
wastage of	12, 102	
Purda ladies—		
instruction of	vi, 220, 221	
medical aid for	xii	
Purulia leper asylum	265, 266	
Pusa Agricultural College and Research Institute	xi, 59 158—160	

Q

Qualifications—		
of legal practitioners	145—146	
of teachers		54
for admission into training institutions	195	
Queen-Empress, Her Majesty The	xii, 221, 227	
Queen Mary's College, Lahore	216, 222, 230	
Queen Victoria Girls' High School, Agra		192
Queen's College, Benares	63	

	Vol. I. Pages.	Vol. II. Pages.
R		
Rabhas	256	
Race (see also under Creed)—		
passes and students classified by	60	
pupils in secondary schools	76	
statistics by		24, 25, 204
Races of India	255	
Railway night schools	236	
Railway Technical School, Lahore	182, 266	
Railway workshops	181	
Rajkumar College, Raipur	229	
Rajkumar College, Rajkote	227, 228	
Rajamundry College, Madras	191	177
Rajpipla, Maharana of, on compulsion	132	
Rajshahi College	69	92
Ram Singh, Sardar Bahadur Bhai	185	
Ramayana, ethical value of	ii	
Rampur Boalia, Madrassa	253	
Rampur Boalia, Sanskrit College at	205	
Ramsay College		90
Ranchi School for the blind	265	
Ranchod Lall Chottelal Technical Institute, Ahmedabad	178	
Rangers, training of	166	
Rangoon—		
medical school at		172
proposed university at	xiii, 43, 55	
veterinary school at	xi, 171	
Rangoon College	68	91
Readership, Sadholal, at Allahabad	52, 204	
Reading rooms	iii	
in villages	283	
Reay Art Workshop, the	184	
Recognition of schools	8, 9, 39, 45	
of European schools	237	
of secondary schools	xiii, 45, 74	
Recreation grounds	ii, iii, 85	
Recruitment of officers	30	
Rector, Governor of Bengal, Calcutta University	44	
Reformatory schools	267—269	
Act of 1897	8	
band music taught in	185	
Registration of schools and teachers	8	
Regulations—		
for controlling students	47	
framed by universities	45, 47, 48	
Reid Christian College	67, 186	90
Religious instruction	ii, 11, 22—23	
at the Allahabad conference	23	
in Burma, in the United Provinces and the Punjab	23	91
in chiefs' colleges	228	
in the despatch of 1854	7, 11	
among Hindus and Muhammadans	23	
local committees on	ii	
policy of neutrality	ii, 22, 23	
in privately managed schools	23	
Reports, occasional	284	
Research	iii	
Research Institute, Dehra Dun	166—168	
Research Society, Burma	210	
Residential arrangements	iii	
in chiefs' colleges	228	
in provincial colleges	66—67	88—93
lack of, in privately managed schools	vii	
Residential schemes in Bengal	66, 67	
Resolution of 1904	vi, 8	
Results of examinations		44—47
Results grants	120	119
Retarding causes of literacy	139	
Retraining	iv, 200	
Rewards for publications	284	
Richey, Mr. J. A.	2	104
Ripon College, Calcutta	63	
Risley, Sir Herbert	255	
Roman Catholic Schools	233, 234, 242, 243	
Roorkee Civil Engineering College	157	
Roos-Keppel, Sir George	198	
on text-books	280	
Ross, Dr. Denison	2, 210	
Roy, Mr. J. N.	2, 20	
description by, how primary schools are started in Eastern Bengal and Assam	135	
Roy, Raja Ram Mohan	4	
Royal Commission on Decentralization (see also Decentralization)	74	
Royapuram Medical School, Madras		170
Roychand Premchand Scholarship	52	
Rural education		162—164
courses	iv, 18, 135—136	
principles of	164—166	
in the United Provinces, Committee on	19	

	Vol. I. Pages.	Vol. II. Pages.
S		
Sabhas	207, 210	
Sabour Agricultural College	159, 161	
Sadholal readership at Allahabad	52, 204, 208	
Sadi, ethical value of	ii	
Saidapet Training College, Madras	189, 191, 195	177
St. Aloysius' School, Vizagapatam	236	
St. Andrew's colonial homes	236	
St. Bede's College, Simla	244	
St. Columba's College, Hazaribagh		89
St. Francis de Sales' School, Nagpur	236	
St. Helen's Convent in Bengal	236	
St. Hilda's Society	234	
St. John's College, Agra	63, 67, 68, 186	90
St. Joseph's College, Madras	4	
St. Mary's Convent, Shillong	222	
St. Mary's High School in Bombay	244	
St. Stephen's College, Delhi	64	
St. Xavier's College, Bombay	63	88
St. Xavier's College, Calcutta		89
Salary grants		119
in European schools	242	
in primary schools	119—120	
Salaries (see Pay) of vernacular trained teacher	200	182
Salvation Army weaving school at Ludhiana	183	
Samajes	207, 210	
Samaldas College, Bhavnagar		88
Samartha Vidyalaya at Talegaon	276	
Sanawar Training College, Punjab	191, 233, 239, 243	
Sanitary engineering	157	
Sanskrit—		
associations	207	
board	205	
college at Benares	205	
college at Calcutta	205	
College library	210	
colleges	xvi, 204—205	
examination, board of	207	
institutions for teaching		289
libraries	210	
Sanskrit school(s)	272	289
pupils in		291
school at Pilibhit	205	
subject taught	203, 204, 272	
Sanskrit learning, seats of	3	
Santals	256	
Sarah Tucker College, Palamcottah	265	
Savaras	256	
Schaffter, Rev. H.	98	
Scholarships (see also Stipends)—		
for archæology and epigraphy	208	
in art colleges, expenditure on		229
for backward classes	259—261	
in colleges	62	
in Dehra Forest College	168	
for Europeans	xv, 231, 241—242	
for girls	220	
Government of India for oriental studies	208	
Government of India for university study	53	
Ibbetson	162	
for indigenous institutions	208	
middle and junior, college	84	
for Muhammadans	248	
primary	114	
Premchand Roychand	52	
in secondary schools		103, 242
Springer research, Bombay	52, 204	
for technical education abroad	ix, 26, 176	
in training schools	188	
School Book Society, Calcutta	5, 282	
School classes in colleges	63	
School final examination (see also School leaving certificate)	viii, 95—101	
courses	88	
equivalent to matriculation	45	
university Commission on	95	
School-going age, proportion of pupils to	15, 139	248
School hours, primary	112	
School house, primary	112, 113	
School hygiene (see Hygiene)	ii, iii, 22, 50, 125—127, 129	
School leaving certificate	viii, ix, 95—101, 185, 216, 217, 240, 241	95, 99, 101
for European schools	xv	
and Government services	100—101	
equivalent to matriculation	45	
School life—		
length of	109, 140	

	Vol. I. Pages.	Vol. II. Pages.
School of design	173, 181	
School of Engineering, Insein	158, 179	
School record	241	
Schools—		
of art	181, 183—185	
for artisans' children	130	
classified	14	
of music	185	
Schrader, Dr. Otto	210	
Science—		
courses for graduation		66—70
Sir T. Palit's gift for study of, at Calcutta	55	
improved teaching	65	
teaching in primary schools	126 - 127	
in universities		71—74
Science Institute, Bombay, endowed	18	
Science studies in the United Provinces		90
Scottish Churches College, Calcutta	61	88—89
Secondary education	71—103	
definition and organisation	71	
general	25	
importance of	vi, 80	
crowding in literary courses	103	
management	73, 75	
principles of	vii	
summary	80—81, 103	
Secondary schools		95—104
boarders, statistics		236
building and staff	81—82	96, 98—104
certificate	25	
size of each class		97
control and recognition	74	
average cost per school and pupil	79	241
discipline	83	
expenditure and fees, statistics of	77, 79	237—242
fees in		105—106, 238—242
grant-in-aid rules, statistics	84—87	107—124, 238
hostels	84	
progress and development	79—80	
pupils by creed or caste	76—77	
scholarships in, expenditure on		242
statistics	vi, vii, 75	231—243
teachers in, number of	82	243
Secular education (in the despatch of 1854)	7	
Selby, Dr. F. G., on full time law colleges	147	
Seminar work in colleges	65	
Sen, Mr. R. N.	156	
Senate, composition and functions	44	
Serampore Baptist College, founded	4	
Serampore Theological College Library	210	
Serampore weaving institute	178, 183	
Sericulture—		
classes for	164	
school for, at Rampur Boalia	182	
Service—		
agricultural	158—159	
forest	166	
Services, educational	xiv, 29—32	
growth of	29—30	
improvement of	30	
improvement in North-West Frontier Province	19	
Indian	30	
lower subordinate	31	
officers in, number and pay	31	
posts outside the regular cadre	31	
creation of provincial	30	
subordinate	30—31	
unpopularity of	187	
Shams-ul-Ulama, title of	207	
Shan Chiefs, education of	230	
Shans	256, 260, 261	
Shastri, Hara Prasad	210	
Sibpur Engineering College	155, 156, 235	
Simla Conferences of 1911 and 1912	x, 204, 234	
Sind Madrassa	252	
Sir James Wilson Medal	162	
Sir Jamsetjee Jeejeebhoy School of Art, Bombay	6, 184	
Sirur school for the blind	265	
Size of primary classes	v	
Sloyd	22, 91, 131, 196, 200	
Smrititirtha	207	87
S. P. G. College, Trichinopoly		
Society, Calcutta School	5	
Society, Calcutta School Book	5, 282	
Society Research, Burma	210	
Societies—		
debating and literary	ii, 68	
learned	210	

	Vol. I. Pages.	Vol. II. Pages.
Specialists required	xvi	
Springer Research Scholarship, Bombay	52, 204	
Staff—		
of agricultural institutions	159—162	
of arts colleges	63—64	
of Dehra Dun Forest College	166—167	
grants		116, 117
of *guru*-training schools	198—199	
of inspectors in Bombay		62
in law institutions	147—148	
of oriental colleges	205	
in training institutions	189—190	
veterinary, in provinces	170	
Stages of instruction	71, 105	40—43
Stages, pupils in	75, 102—103, 139	
Stanley's, Lord, despatch of 1859	8	
State technical scholars	176	
Statistics—		
of European schools and pupils		26—29
of examinations		44—47
of expenditure		16—19, 30—39, 48—51
general		15—39, 55
of hostels		52—53
pupils and institutions		15, 20—23
pupils by race and creed		24—25
Stain, Sir A.	210	
Stipends (see Scholarships)—		
for elementary teachers	198	
for forest provincial service	168	
in *guru*-training schools	198	
to mistresses under training		191—192
in the North-West Frontier Province normal school	197	
in training institutions, value of	188, 191, 192, 195	178—180, 182—183, 185, 186, 188
Students—		
attainments of	51	
control of	47	
in England (see also Burma Society)	69—70	
Students' residence committee at Calcutta	45	
Studies—		
Boards of	44	
furlough	201, 284	
higher	52, 56, 56	
oriental	203—210	
nature (see Nature study)	iv, 125, 128—130, 165, 200—201	
Sub-deputy inspectors in the United Provinces		63
Subordinate civil officers and inspection	36	
Subordinate Educational Service	30—31	162—164
Sundar Dass Suri, Rai Saheb Lala	125	
Superintendent of Industries, Bengal	174	
Surveillance of discharged boys	267, 269	
Survey schools	154, 158	
Surveys—		
educational	134—135	
industrial	173	
of schools	20	
Syed-ul-Madaris	205	
Syllabus—		
in agricultural colleges	163	
in chiefs' colleges	228—229	
in Dehra Forest College	167—168	
in training colleges	192—193	
at training institutions	196	
Sydenham, Lord	65, 160	
Syndicate—		
Burma educational	39	184—185
functions of	44—45	

T

Tagore Professor of Law, Calcutta	52	
Takhtis (small writing boards used as slates)	275	
Talukdars, education of	229	
Talaings	256, 259	
Talavias	257	
Taluk boards	37, 116	
Tamil schools	261	
Tara Chand, Lala	200	189—190
Tata, Mr. J. N.	177	
Tata family's endowments	ix, 18	
Tea gardens, education of those employed in	137	

	Vol. I. Pages.	Vol. II. Pages.
Teachers—		
for aboriginals, difficulty of providing	257	
agreement from	85, 188, 200	
associations of	201	177
children of, facilities for	123	
class from which drawn	iv	
classes and meetings of		182, 183
conferences of	200	
elementary, training of	iv, 197—201	
European, pay of	xv	
female	vi	
for girls' schools (see also Women teachers)	212, 223	
in Government service	32	
itinerant, for women	221	
under local boards	32	
lack of Muhammadan	254	
numbers	187	
average pay of	3	
improvement in pay of	31	
as postmasters	123	
primary	112, 113, 118, 119, 121—124	
primary, improvement of efficiency in the United Provinces		134
primary, pay of	iv, 32, 121—123	
primary, training in the North-West Frontier Province		140
in privately managed schools	32	
improvement in privately managed schools	21	
provident funds for	xv, 21, 32, 124	
pupil teachers	3, 7	
qualifications of	121—122	54, 243
in secondary schools	82, 83	96, 97, 99, 243
secondary, pay of	vii, 80—82	243
secondary, qualifications of	82	243
training of	187—201	
training of, for aboriginals	258—263	
training of, for European schools	243—244	
Teaching—		
bachelorship of	192	179
commercial	xii, 185, 186	
direct method of	92—94, 193	130—131
in reformatory schools	267—268	
in secondary schools	91—95	
Teaching University	xiii, 25, 43	
Technical education	ix, 173—186	
committee	8, 26	
conference	26	
definition	173	
difficulties	175	
and employers of labour	175, 181	
of Europeans	235—236	
general	26	
report by Colonel Atkinson and Mr. Dawson	x, 175	
scheme of	173	
Technical scholars, subsequent careers of	176	
Technical scholarships	ix, 26, 176	
committee in England	26	
Technical schools	156	
inspectors of	35	
statistics	ix, 175	259
Technique, malarial	xi	
Technological classes	177	
Technological Institute, Calcutta, committee on	173	
Technological institutes	ix, 173, 176—177	
Temperance, teaching of	xv	
Temple Medical School, Patna		171, 174
Teppakulum Institute of Mechanical Engineering, Trichinopoly	154	
Text-books	279—283	
agricultural	164	
recommended by boards of studies	44	
published by the Calcutta University	280	
committees	40, 279	
in hill languages	258	
moral	ii, 24	
Textile industries	176	
Textile Schools and classes	182—183	
Tharus	258	
Theosophical Society's Library, Adyar	210	
Thibaut, Dr. G.	52, 204	
Thibaw, King	208	
Thomason Civil Engineering College, Roorkee	6, 59, 177, 179, 235	
Thomason's, Mr., educational scheme	6	
Tinctorial chemistry	156, 177	
Tipuras or Tipperas	258	
Titles—		
examination, Madras	208	
examination for madrassas	252, 253	
for oriental knowledge	207, 208	
Todas	258	

	Vol. I. Pages.	Vol. II. Pages.
Tols	3, 204, 272	
grants to	xvi, 206, 208—209	
Trade schools	173—175, 274	
Trades—		
taught to defectives	265—266	
taught at reformatory schools	268	
Trained teachers—		
influence of	196	
pay of	iv, 82, 122, 189, 190, 197, 198, 200	179, 182
Training—		
apathy to	187, 197	
class, Hindu female		191
of elementary teachers	iv, xiv, 197—200	
causes retarding expansion of	187	
in horticulture	165	
of inspectors	201	
method and cost	193—194	
of midwives	221	
of mistresses	223—224	191—193
of Muhammadan teachers	254	
period of	195	
of primary teachers	121—122, 124	
of primary teachers, improved facilities in the United Provinces		135
of secondary teachers	xiv, 191—197	
of teachers	xiv, 187—201	177—188
of teachers, general progress	26	
technological, in England	175, 176	
university course		73
Training institutions	xiv, 187—201	177—188
attendance at	188	
buildings	190, 198	
class at Sanawar (see Sanawar Training College)	233	
college for Europeans	235	
colleges	191—194	
colleges, admission to	191, 192	178
degrees or diplomas	192—193	
expansion and organisation	187	
expenditure	188, 190, 191, 193, 194	262, 264
guru-training schools	198—199	
for mistresses, statistics		191—193, 263—264
practising schools	iv, xiv, 188—189	
pupils	187, 188	261—264
scholarships in	188	
schools	194—196	
staff of	189, 190	
statistics of		261—264
stipends	188, 191, 192, 195	
vernacular	197—200	
Transfer—		
of board schools to Government (United Provinces and Punjab)	73	98, 100
of inspecting staff	33	63
laxity in	vii, 85	
of reformatory schools	267	
Tropical medicine—		
course in	xi, 153	
diploma of	xi, 152	
Tutorial work in colleges	65	
Type plans for school buildings	21, 198	
Type writing	185, 186	

U

United Provinces—		
school leaving certificate	ix, 99—100	
improvement in pay of teachers	82	
Upper primary schools (see Primary schools)	iv	
Universities	41—57	
Act of 1904	xii, xiii, 8, 41, 51, 54	
affiliated colleges	59	
affiliating	xii, xiii, 43, 49	
Allahabad University	8, 41	
area and population of territories		207
Bombay University	8, 41	
Calcutta University address	i, 27	
Calcutta University	8, 41	
Calcutta University law college	xii, 148	
Chancellors	44, 47, 50	
character of	41	
colleges	51	
colleges and students		83

	Vol. I. Pages.	Vol. II. Pages.
Universities—*contd.*		
commission of 1902	8	
commission on school final examination	viii, 25	
communal	25, 43	
controlling powers of	29, 39	
courses	41, 42, 44, 48—51	66—74, 81, 82
courses, admission to	viii, 48	
courses, diagrams of		75—79
defects of present	43	
degrees in training	192	
relation to department of public instruction	39	
endowment by Sir T. Palit for science studies at Calcutta	18, 52, 55, 56	
establishment of new	xiii, 25, 43	
examination fee	49	211
examination results	42, 49, 53, 60	
examination subjects		81—82
examinees by race or creed	53, 54	84
examiners, selection of	49	
expenditure	54	
faculties	44, 48	71—74
faculties courses, examinations		71—74
federal	xiii, 42, 43	
functions of	45	
gifts to	18, 52	
special arrangements for admission of girls to	215	
grants to	41, 42, 54—55	
higher studies	xiii, 41, 42, 45, 51, 52	
law colleges	147—150	
law examinations	146	
law examinations, subjects for		165—169
lecturers	52	66
local	42	
Madras University	8, 41	
matriculation, schools and pupils		85
numbers	53	
organisation	41, 44—48	
oriental studies at	xvi, 204, 206	
Oxford and Cambridge, and Indian degrees	70	
passes	42, 49, 53, 60	
progress, general	25	
publications	56	
readers	52	
Punjab University	8, 41	
recognition of schools	8, 9, 39, 45	
regulations	47	
scholarships	53	
teaching	43	
teaching functions and advantages	41—43	
types of	xiii, 42, 43	
Vice-Chancellors	44, 50	
work of	xiii, 41, 42, 45, 51, 52	
Urban curricula	iv, 125	
Urdu as vernacular for Muhammadans	249—252	
V		
Vacation classes		177
Vakils, qualifications for enrolment of	145—146	
Venis, Dr. A.	2, 204	
on oriental studies	206	
Venture schools	iv, 38, 105, 115	
Vernacular education	105	
Adam's report	3	
middle vernacular schools	v, 14, 138—139	
vernacular certificates		184
Vernacular final examination in Bombay	113	
Vernacular language at the Calcutta University	203	
Vernacular pupils, special teaching of English to	v, 72	
Vernacular teaching schools, private	273	
Vernacular trained teachers	197—200	
Vernacular training institutions	197—200	
Veterinary education	xi, 169—172	
college at Belgachia	59, 171	
college at Bombay	171	
colleges, general	59, 169—171	
military students	170	
pupils		176
students and staff	170	
school in Burma	170—171	
Vice-Chancellors of Universities	44, 50	
Victoria College, Commilla		92
Victoria College of Science, Nagpur		92, 187
Victoria Diamond Jubilee Hindu Technical Institute, Lahore	179	
Victoria Jubilee Technical Institute, Bombay	178, 180, 182	
Victoria Memorial School for the Blind, Bombay	265	
Victoria scholarships for Muhammadans	248	

	Vol. I. Pages.	Vol. II. Pages.
Victoria School, Kurseong	236	
Victoria Technical Institute, Nagpur		92
Village libraries	283	
Village map	iv, 12, 125, 130	
Visiting committees, functions of	40	
Visiting governesses	221	
Visitor, general	6	
Visits—		
of professors, etc.	xvii	
of training college staff	xiv	
Visual instruction	284	
Vizagapatam Medical School		170
Vladivostock, Oriental Institute at	209	
W		
Wa-Palaung	256	
Ward, Mr. A. W.	93	
Warren Hastings and Calcutta Madrassa	3, 203, 205	
Wastage in schools	12, 102—103	
Weaving	x, 182—183	
teaching of, to hill tribes	262	
hire purchase system for weavers	183	
peripatetic instructors	183	
schools and classes	178, 182—183	
schools for girls	183, 222	
Weaving Institute, Serampore	178, 183	
Wesleyan Mission Industrial School, Bankura	181	
Williamson endowment in Assam	182	
Wilson College, Bombay	4, 63, 96	88
Wilson lectureship at Bombay	52	
Wilson philological lectureship	204	
Women teachers—		
scarcity of	223	
training of	223, 224	191—193
Wood's, Sir C., despatch of 1854	6	
Woodburn Cottage Homes, Kalimpong	236	
Woodstock College, Mussoorie	244	
Workshop—		
Messrs. Burn & Co.'s	181	
railway	181	
Reay Art	184	
Wright, Mr. A. G.	2	
on games	68	
on matriculation results	97	
on school final examination	101	187
on training		
Wyatt, Mr. H. G., on teaching in schools	94	
X		
X-ray Institute at Dehra Dun	xi, 153	
Y		
Yanadi	256	
Yaravda Reformatory School	267	
Young Men's Christian Association	186, 236	
Young Women's Christian Association	186, 236	
Youthful offenders	267	
Yunani system of medicine	205	
Z		
Zemindar's College, scheme for a	229	
Zend	272	
Zenana Mission School for the Blind, Poona	265	

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